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THE

NORTH AMERICAN REVIEW.

VOL. CIX.

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Tros Tyriusque mihi nullo discrimine agetur.

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NORTH AMERICAN REVIEW.

No. CCXXIV.

JULY, 1869.

ART. I. — *La Psychologie Morbide dans ses Rapports avec la Philosophie de l'Histoire, ou de l'Influence des Névropathies sur le Dynamisme intellectuel.* Par le DOCTEUR I. MOREAU (de Tours), Médecin de l'Hospice de Bicêtre. Paris. 1859. pp. 576.

OF all the diseases to which our race is liable, we doubt if there is another that touches our interests at so many different points as insanity. In its attacks it spares no class of men; it meets us every day in our courts, embarrassing the course of justice; its victims are regarded by every Christian state as entitled to special care and protection; and the kind of management best calculated to reconcile the claims of humanity with those of a proper economy has become one of the great questions of social science. Though none of the results of recent inquiries into this subject will compare with those grand discoveries, the circulation of the blood and vaccination, yet taken in the aggregate, and regarded in their indirect as well as their direct and present effects, it cannot be denied that they amount to a considerable contribution to our knowledge.

The course of inquiry respecting mental disease has been greatly hindered by a class of difficulties over and above those incident to the study of all disease. Besides the organic lesion or disturbance, there is the mental affection springing from causes as yet but little understood. The part borne by each of

these elements in producing the ultimate result, their common bond of connection, the laws by which they act and react on each other, — all these are problems compared with which those involved in the study of mere bodily disease are trivial or transparent. Moreover, the student found himself, at the very threshold of his inquiry, face to face with the metaphysician and the theologian, by whom he was warned against entering upon their domains if he would shun the pains and penalties imposed upon materialism, and was thus compelled to receive passively whatever they offered him without examining it too closely or curiously. The idea of a humble inquirer who watched the mental phenomena in the wards of a lunatic hospital, and sought for a key to their mysteries amid the blood and filth of a dissecting-room, questioning the sufficiency of those speculations which the world had been accustomed to regard with an almost sacred awe, implied a sort of presumption that bordered on sacrilege. On this point, there is now little room for complaint. The freest investigation may be pursued without provoking censure, and a man may come to almost any conclusions in such studies without being thought an enemy of religion or morality.

These hindrances to the study of morbid psychology served to prevent much progress in it until within a comparatively recent period. Observers were content with recording the more obvious manifestations of mental and bodily disturbance; they made autopsies, faithfully describing every lesion and change; and they tried new medicines and new appliances. But there came no results worthy of so much labor. It scarcely helped to dissipate the obscurity that hung over the whole domain of mental disease. It furnished no answer to the questions that met the student at the outset of his inquiries. Indeed, people were hardly agreed in considering insanity a legitimate object of physiological inquiry. It was thought by many to be something quite outside of the operation of natural causes, — probably a visitation of God or the Devil. Only fifty years ago, it was declared by a distinguished German writer (Heinroth) to be the unhallowed fruit of copulation between the soul and sin.

Pursued in such a spirit as this, the most diligent study of

insanity could reach no very valuable conclusions. Naturally much attention was given to its causes; but it seemed to be enough to ascertain those prominent, special events that preceded it not very remotely, and to recognize the connection, without much care to understand all or any of the conditions. The first step in the investigation was simply a record of this connection; and thus, whether the attack had been preceded by a blow on the head, a suppressed secretion, a domestic trouble, a religious excitement, or the turn of life, that particular event, singled out from all the other events of life, was to be regarded as its cause. It was no part of the philosophy of these earlier investigators to explain how such dissimilar agencies could be competent to produce similar effects. No mortal had ever undertaken to trace the successive steps of that morbid process which, beginning with a fall on the head or a disappointment in love, ended in an attack of furious mania or melancholy and suicide. The revelations of pathological anatomy were of doubtful significance to men who were unable to go beyond the visible record, and whom the actual lesions before their eyes taught nothing respecting those that had preceded them. They looked for something, they hardly knew what, and what they found left the mystery as deep as ever. The tumor, the abscess, the inflammation, the thickening, the serous effusion, were thoroughly examined and minutely described; but whether they had caused the insanity, or the insanity had caused them, was far from being a settled point. Certain mental phenomena during life had coexisted with certain phenomena discovered after death, and to know this fact seemed to be a positive gain in which they had a right to rejoice. Names and phrases were mistaken for ideas, and a collection of barren facts for a treasury of invaluable knowledge.

It was reserved for a recent generation to see the study of insanity pursued with reference to its proper aims, under the rules and in the spirit of a liberal science. Pinel began the reform by discarding many of the time-honored notions connected with it, and throwing upon its difficulties the light of a broad, sagacious, and disciplined intellect. Esquirol, though very differently endowed, contributed to the same end, by observing and recording a great many cases, with a degree of

clearness, precision, and graphic art never exhibited in the same field before. Following the same style of observation, their successors have entered upon a line of inquiry which shows the highest conceptions of the end and aim of their researches. Prepared by a severe professional training, with the objects of their peculiar study thronging around them, they have succeeded in taking that necessary step which consists in the correct appreciation of the relative importance of facts; and, while not despising the results of their predecessors, they seek for something more worthy the name of what Bacon calls the *fruit* of scientific investigation. Although they think it well enough to know how many patients in a hundred recover and how many do not, how many are over a certain age and how many under, yet they deem it far better to ascertain, if possible, those primordial movements which initiate mental disorder, the conditions under which the integrity of the mind is preserved, and the laws which regulate the transmission of the morbid germ from one generation to another. Among the investigators of this school, none has achieved a more honorable or permanent distinction than the author of the work before us. To the abundant opportunities for observation afforded by the private asylum at Ivry and a long service at the Bicètre, he joins a knowledge of character derived from much intercourse with the world, and that kind of intellectual discernment that can see in a fact something more than what directly meets the eye. He is entitled to all the credit that belongs to an accurate observer, a laborious student, and an original thinker. No one interested in studies of this kind can safely neglect his works, for they indicate, better than those of any other writer of our times, the immense stride which the study of morbid psychology has made since the last century.

The work before us furnishes a new and very original interpretation of the facts of psychological science, well calculated to excite the scorn and derision of all who adhere to the beaten track, and the admiration of those who rejoice in bold inquiry, though they may not accept the conclusions to which it leads. If any apology were needed for bringing it up at this late day, it would be enough to say, that it is but little known in this

country, and that most of its views have been rather confirmed than weakened by subsequent inquiries. At present, we shall bestow less attention on the leading idea than on the subordinate but no less important principles from which chiefly that is supposed to derive its support. In illustrating and explaining them, we shall not confine ourselves strictly to the author's text, his work being intended for a class of readers somewhat familiar with the subject.

Physiologists have been fond of considering life as a state maintained by the action of certain forces, mysteriously attached to the organic structure, against the perpetual influences around it that tend to impair its vigor and drive it from the material form which it serves to animate. It appears, too, that particular parts of the structure are subjected, not only to the general operation of this law, but, each in its peculiar way, to some special adverse influence tending to deteriorate and destroy them. The lungs, the liver, the bladder, the glands, are thus exposed to mortific agencies in the earth or atmosphere; and in this respect the brain differs from them only in the kind of agencies that deteriorate its quality and prepare it for fatal disease. Though not so easily examined and described as many of the agencies of nature, yet we may be none the less able to mark the general character of these, the mode of their operation, the extremes of their activity, and the means of prevention.

To ascertain the initial movement of disease, we must consider the brain reduced to its simplest elements. These, as now understood, consist of a cell, with connecting filaments, and blood-vessel. Within the former, which is nourished by the latter, is generated the nerve-force on which the mental phenomena depend. By means of this simple apparatus are evolved all those primitive forces which, in one way or another, are essential to the mental phenomena. The various combinations of cell and vessel furnish the requisite variety of particular results. The vital force which keeps them in activity, and thus secures the fulfilment of their appropriate function, is called excitability, and, of course, supposes an exciting agent. In the healthy state, this activity of the one and the other is exactly balanced, and the function is perfectly executed. Let

this excitation be increased, as it is by adverse influences, and then this nice relation is disturbed, and the ultimate result is marred. Here we have the starting-point of all morbid movements, all abnormal conditions. The ultimate morbid condition is determined by the location, the extent, and the manner of progress of the morbid activity. Its existence is announced by one or more of various affections, ranging from a simple exaltation of the normal sensibility to the most demonstrative affections of the mental or nervous power. Considering the local extent of the morbid action, the rapidity of its progress, and the diverse functions of the various parts of the brain, we cannot be surprised at the almost infinite variety in the final issue, while the initial morbid movement, the essential condition, is the same in all. Consequently, we may have, in one case, a disorder of sensibility, such as the neuralgias; in another, a disorder of motility, such as chorea; in another, a neurosis, such as hysteria, catalepsy, eclampsy, epilepsy; or the disorder may be chiefly a mental one, such as eccentricity or mania. By a law of morbid nervous action, these various disorders often supplant or accompany one another in the course of their progress, and assume protean shapes without end. Change is the characteristic feature of all forms of nervous disease.

A word or two more as to the primordial fact of mental disorder, before we turn to its ultimate results. These results, varying as they may in apparent intensity abstractly considered, convey no certain indication of the intensity of the morbid movement on which they depend. Something, however, may be learned on this point from the order of their succession. In one case, for instance, epilepsy may be the first appreciable sign of a morbid condition, while in another it may be the last in a long series of pathological events. At first only what may be called a dynamic lesion, it may end, if life continue long enough, in lesions of structure visible to the eye. These mark only the duration of the morbid action, but indicate nothing as to the initiatory stage. Hence it is that dissection, in the case of persons who have died insane, often reveals to the eye, even though assisted by the most ingenious instruments, no change of structure, — a fact which has given rise to the idea, entertained by a few, that the brain is not

the seat of insanity. The point of material interest is, that, between the first and the last member, in this series of morbid actions, there may intervene a period measured in most cases by years or generations. This curious fact, the full significance of which has been but recently learned, furnishes us with a key to many of the mysteries of mental derangement. The phenomena attending it cannot be too carefully considered, and, therefore, no apology is needed for presenting them with some degree of minuteness.

The adverse influences that vitiate the health of the brain seldom do more at first than produce that abnormal movement already mentioned, called superexcitation. Its effect on the mind, when it has any effect at all, is chiefly manifested by some slight deviation from the ordinary routine of human conduct, and from an average propriety of thought and feeling. The person may exhibit some phase of exaltation or depression, some eccentricity of manner, some extravagant notions, some disregard of the common conventions of society, some domestic estrangements, some strange and impulsive movements, a fondness for drink, or some other debasing habit, and often only an unreasonable manner of dealing with practical matters, not easily described, but obvious enough to the practised eye. Oftener, however, the effect is witnessed scarcely at all in the psychological condition, but is manifested solely in anomalous sensations, — in pain or aching of the head, or some other neuropathy, in a sense of weariness, or in some form of nervous disease. Nothing more than this may be exhibited during the life of the individual. He dies and gives no other sign of cerebral disorder, but the disorder may not die with him. It passes along to successive generations in accordance with the laws of hereditary transmission, and makes its appearance in a variety of forms. The existence of this law was known to the earliest observers, but the full range of its operation, especially in regard to morbid and abnormal conditions, began to be discerned only within a very recent period. Already investigation has made us acquainted with many of the conditions by which this curious physiological process is governed, and has thrown a flood of light on one of the obscurest problems in the science of life. Our limits will

allow us to discuss this subject only so far as seems necessary for a clear understanding of the points more particularly before us.

It is an ordinance of nature that in the process of generation like produces like. Not that the beings thus produced are exactly alike. Diversity there always is. It is for the scientific inquirer to ascertain the limits to which this may extend. In a rude general way they have already been determined by the common observation of mankind. The likeness is something closer than that which prevails between the members of a common order or genus. It is not the likeness of a lion to a tiger, or of a horse to an ass, but the likeness of a lion to a lion, and of a horse to a horse. On the other hand, this kind of likeness does not exclude a certain amount of difference; and we are no less strongly impressed with this fact of diversity, as existing between individuals, than we are with the essential similarity of all the individuals of a species. Here, then, are two orders of hereditary transmission, or *heredity*, if we may Anglicize the French term, viz. one embracing the traits that characterize the species, the other the traits peculiar to individuals. With the latter only we have to do in this inquiry.

The transmission of the bodily features by the parent to the offspring has been more thoroughly investigated, especially in the case of some of the domesticated animals, during the last fifty or sixty years, than ever before; and the result has been to demonstrate a degree of exactness and uniformity in the operation of the laws that govern it that reminds us of the phenomena of brute matter. Not only is the existence of the general law proved, but, what is equally important, the apparent exceptions to it are proved to be subject to laws no less inflexible. But at the very threshold of the subject, we meet with an order of facts liable to mislead the hasty observer. We are in the habit of saying that the features of the parent are transmitted to the offspring, but we must bear in mind that, of necessity, the features of both parents cannot coexist in the child. He cannot inherit the aquiline nose of the one and the snub nose of the other, the black eyes of the one and the blue eyes of the other, the vigor and hardihood of the one and the

fragility of the other; but on the contrary, will have perhaps the eyes of the one and the nose of the other, the hands of the one and the feet of the other. In place of this combination of traits derived some from the one parent and some from the other, there is usually a mixture, often obvious, but amounting occasionally to a complete fusion where no trait of either parent can be discerned marked by its original character. Let us observe, in passing, that traits implying considerable deviation from the normal type, — such as supernumerary toes or fingers, or dwarfish limbs, — which have arisen from some inexplicable play of organic affinities, are not transmitted with the same uniformity. In many of the offspring they do not appear at all, and unless particular pains are taken by pairing those only in which these peculiarities exist, they sooner or later disappear altogether. Indeed, no remarkable trait of recent origin is easily perpetuated. Of this fact stock-breeders are perfectly aware, for not until the desired trait has descended through several generations are they sure that it is firmly fixed in the blood and not liable at every remove to disappear. Thus steadily nature adheres to prevailing forms, and shrinks from a perpetuation of any considerable deviation from them.

There is another reason why the features of neither parent should be very exactly reproduced in the offspring. Every individual carries within him the mingled blood of two other individuals, in both of whom are to be found traces of innumerable streams flowing from distant sources as into a common reservoir, which are often interrupted, probably, and may disappear from view, but which preserve to the last their distinctive qualities. It is not necessarily from his immediate predecessors alone that the individual derives his physical and mental qualities. In him may reappear the tokens of some distant ancestor, which have been transmitted from one generation to another in a latent state. The natural tendency of mingling various bloods is to neutralize the activity of one or another, or to reduce the sphere of their influence within the narrowest limits; and the more remote they are, the stronger their tendency to be absorbed and confounded in the nearer and stronger streams of the immediate parentage. Accordingly,

we find that the transmission of any particular trait precisely as it existed in the parent, though not very uncommon, is, nevertheless, far from the invariable rule. It is a vulgar view of heredity which supposes that every or any trait must descend from parent to child in all its original vigor and proportions. But while temporary disappearance is compatible with the physiological law, it is equally true that traits may be transmitted in a latent form, and may reappear at some distant interval. Instances of this law, or a closely correlative one, will be better considered when we come to speak of the transmission of disease. At present we need only say that such instances furnish no support to the idea that a trait not derived from the immediate progenitor, though existing in uncles, aunts, or cousins, is not attributable to heredity. The simple fact is, that in some of the family it is fully developed, while in some it is latent but more or less ready to make its appearance in the next generation. This we are obliged to believe, unless we maintain that the recurrence of a trait, after it has once disappeared, is purely accidental, — a recurrence which is too common to be explained in this manner.

Not only are the bodily traits and peculiarities of structure transmitted, but the same is true of the moral and intellectual qualities, — aptitudes, appetites, passions, feelings, habits of thought, — and with the same apparent irregularity. Considering that these are connected with the cerebral system, and dependent on it for their manifestation, this inheritance might be expected, and the fact is proved as satisfactorily as any other in the whole category of hereditary transmission. The highest manifestation of intellect — what passes under the name of genius — is, however, seldom transmitted, and the fact has been inconsiderately regarded as disproving the whole doctrine of the hereditary character of the moral or intellectual nature. Genius, however, is not a simple, definite power, but a highly complex manifestation resulting from the mingled activity of many parts of the brain endowed with the finest qualities by structure. The transmission of genius in its highest forms, therefore, implies the simultaneous descent of a great number and variety of organic peculiarities. The thing is not impossible, but, under the ordinary operation of the law of heredity,

is not likely often to happen. Single talents, simple and circumscribed in their nature, are more frequently transmitted. And the same is true of the moral powers. A benevolent, or devout, or proud, or timid, or bold man often sees his characteristic quality displayed in his child; but that complete, rounded, moral development which occasionally distinguishes some favored mortal is seldom repeated in the next succeeding generation.

As a general rule, peculiarities of structure which are the result of accident subsequent to birth go no further, and the parent who has thus lost a limb or an eye has no apprehension of seeing his offspring born deficient in this organ. But it is well known that aptitudes which are produced by long, special instruction may be transmitted to the offspring. This fact is strikingly manifested in dogs, whose peculiar qualities, such as pointing, setting, and retrieving, strongly hereditary as they are, were originally obtained by a process of training. At first the transmission of such qualities is uncertain and irregular, and not until they have passed through several generations do they become fixed in the constitution of the breed. And there can be no question that the general improvement of the physical and mental character of man, produced by assiduous culture and other elevating influences, is felt by succeeding generations. This is the potent agency effecting the advancement of the race. Without it, one generation would be little if any better than its predecessors, because utterly without the benefit of any cumulative improvement. Instruction raises the individual, but it is heredity which raises the race.

Bearing the above facts in mind, we shall the more readily understand the true origin and propagation of disease, because they are governed by the same general laws as those of the normal and healthy traits. There is this difference in the two cases, that disease originates in conditions and influences adverse to the healthy action of the nervous system. None the less, however, does it become an organic trait, subject to the same laws of propagation as any feature of the face or quality of the mind. The initial step in the morbid process, as we have already seen, is a superexcitation of the vital activities

inherent in the cerebral organism, and the final one is obvious lesion of the structure. But the whole process, we must remember, seldom passes through all its stages within the lifetime of a single individual. Within that period, it is usually confined to the first stage, but it becomes a fixed fact in the cerebral economy, and is transmitted with as much persistency as might be expected of a trait so recently engrafted on the common stock. The circumstances of this transmission are pre-eminently matter for curious and important inquiry, and, in view of the painful frequency of mental diseases, deserve to be better understood than they generally are.

The affections of the brain, like those of other organs, are seldom transmitted to all the offspring; and, not unfrequently, all are spared the sad heritage. They disappear before the stronger influences of better blood concerned in the work of reproduction, or are overborne by the more settled traits that belong to the normal condition. It is to be considered, however, that in a large proportion of cases where the offspring seem to have escaped, the abnormal affection may exist in a latent form, to appear, perhaps, fully developed in a subsequent generation.

The observations of contemporary inquirers have made us acquainted with another fact scarcely suspected before. It used to be thought that the idea of hereditary insanity implied the existence of mental disease, in precisely the same form, in the immediate parent. Observation and analogy both lead us to consider every case as hereditary where abnormal action, even the least intense or prominent, existed in the parent. The essential thing is a fixed, persistent deviation from the line of healthy action. Precisely what shape it may take, either in the individual in whom it originates, or in the succeeding generations to which it is transmitted, depends on causes which we have scarcely begun to understand. Of the fact, however, there can be no doubt. Unequivocal, demonstrative mania or lifelong epilepsy may be represented in the offspring by a dormant germ never quickened into action, or by mental peculiarities that pass in the world for originality or affectation, or by some inflammatory or congestive disorder of the brain, or by a repetition of the same form of mania or epilepsy.

Until our own day, little account was made of those minor affections of the brain which are manifested by headaches and other slight forms of neurosis, but which, nevertheless, become the foundation of the severest forms of mental disease. Neither was there supposed to be any connection between the mental or convulsive disease of the offspring, and those habits of the parent — drinking, onanism, etc. — which, without inflicting upon their subject any manifest derangement, nevertheless occasion a kind of cerebral deterioration, which may be transmitted to succeeding generations, to make its appearance in every possible form of mental or nervous disorder.

In the current notions on this subject, some confusion of thought has always prevailed respecting the precise thing which is really transmitted. A little attention to the history of other diseases would have prevented any error on the subject. Nobody supposes that phthisis, cancer, or gout, all regarded as hereditary, are conveyed from parent to child with all their distinctive characters. Years must pass before the evil is revealed at all, simply because what is really transmitted is only that abnormal condition designated as tendency to disease, or that initial stage of it which is held in check by the antagonistic forces of early life, and which, perhaps, may never attain a hurtful degree of activity. The multitudes who are understood to have a tendency to consumption may live long and comfortably under a judicious hygiene, and die at last of some other disease. And this is precisely the case with mental disease. It is only the primordial germ — the taint — that is transmitted, in one degree or another of intensity. In answer to the question whether the insanity of any particular person is hereditary, it is not enough to show that the disease has occurred in none of his progenitors. The hereditary element is fairly established if it appears that some near progenitor suffered from any affection of the head. The change in the type of the disease, as it passes from one generation to another, which is so characteristic of insanity, is not less frequently from a higher to a lower grade of intensity than the reverse. Hence it is that we often see among the children of the insane one maniacal, another imbecile, another epileptic, another hysterical, another eccentric, another pas-

sionate, another alternating between exaltation and depression. To recognize the hereditary element in one of these cases and not in another indicates no very broad observation of the course of disease, nor a very nice perception of its affinities and relations.

It would be interesting to know in what proportion of cases well-developed mental disease is transmitted in any form to the offspring. The fact that it may exist in a latent state, giving little or no indication of its presence, must necessarily prevent any very satisfactory statistics on the subject. Common observation shows us that all the children, where there are several, seldom escape, while some remain entirely free from any trace of disorder. Thus is illustrated the operation of the physiological laws that are concerned in the process of transmission. While in some cases the force of heredity carries down the morbid tendency, in others Nature asserts her right to transmit the characters of the race free from foreign admixtures and abnormal ingredients. Besides, the healthier blood of the sound parent may play a controlling part in the formation of the new being. We are not warranted in believing that of these two forces, the normal and the abnormal, the former is less likely to prevail than the latter; so that, in the long run, half the offspring at least may escape. There are conditions in the case, as yet very imperfectly understood, that forbid any more definite conclusion than this. No more can be said, with any approach to certainty, than that the longer the cerebral trouble has existed in the family, and the more decided its action has been on the nervous system, the more likely it is to be transmitted.

The general doctrine is that the morbid movement which ends in insanity is a progressive one, and usually requires more than one generation in order to reach its full development. Of late years the proportion of cases having an hereditary origin (including in this category those where the disease existed in collateral branches) has been estimated by few practical observers at less than one half. Measured by our views of hereditary influence, and with exact information of the parental antecedents, this proportion would be greatly increased. We would not say that insanity never exists ex-

cept when the hereditary element is present, for cases have been observed that would prevent such a conclusion, though they are not exactly of the kind that the ordinary views of this subject would lead us to expect. It would seem as if a blow on the head, a sunstroke, a habit of drunkenness, a violent fever, were abundantly able, each of them, to cause insanity, without the aid of any innate tendencies. Yet it is a well-observed fact that in a large proportion of the cases thus ostensibly produced there is also present the hereditary predisposition. In fact, we find that the number of the cases attributed by practical writers to some special exciting cause has been steadily diminishing, while the number of those set down in the ordinary tables as hereditary or of unknown origin has been as steadily increasing. The meaning of this fact cannot be misunderstood; for, inasmuch as mental diseases do not spring out of the ground, we can scarcely resist the conclusion that most of these cases in which the cause is unknown have an hereditary origin. Moreau thinks that not less than nine cases of insanity out of ten may be fairly attributed to hereditary conditions; and we are inclined to believe that this estimate, large as it is, will be found to be hardly large enough. Still, the agency of exciting causes in producing insanity is too potent to be despised. Where the predisposition exists, they serve to foster and quicken it into activity, while without their influence it might have remained in a latent state. If a person strongly disposed to mental disease sustains a domestic affliction, or plunges into a course of religious excitement, or becomes absorbed in the mysteries of spiritualism, and then becomes insane, the true explanation of the fact is, not that any of these things caused his insanity, but that they helped to develop into fatal activity a morbid germ which otherwise would have always remained a germ. It is to be supposed that the germ itself had been created in a previous generation by the action of such causes in quickening the vital activity of the cerebral organism, and permanently establishing a state of superexcitation. And thus it is that great social movements, though implying an excessive strain of the mental powers, exert a pernicious influence on the brain, less by depriving the actors of their reason than by establishing

a morbid tendency which develops into insanity in a subsequent generation. This view of the subject might be strengthened, perhaps, by a searching examination of the operation of these so-called exciting causes, — an examination which would show, either that they are rather the effect than the cause, or that they are accidental, — having no necessary connection with the disease, — or that they cannot be supposed, upon any acknowledged laws of pathological action, to possess the efficiency attributed to them. Such an investigation our limits forbid, for we have yet to unfold some important points more directly connected with the present inquiry. We have said that it is the tendency to insanity, the primordial germ, not the full-grown disease, which is transmitted from one generation to another. Let us now see what becomes of it after it is transmitted.

No one of the many manifestations of such morbid tendencies is more clearly or generally recognized than that which passes under the name of insanity. But it is not to be forgotten — for the fact is one of great practical importance — that up to the very outbreak of actual disease the patient may have presented no indication whatever of mental disorder or imperfection, but, on the contrary, may have been uniformly quiet, self-possessed, and well balanced. The morbid condition may be manifested in some convulsive affection, such as hysteria, chorea, epilepsy, or some paroxysmal loss of proper consciousness, such as catalepsy or somnambulism. It can hardly be necessary, even if our limits would permit, to indicate all the manifestations of this unsoundness; but there are some not generally regarded as of an hereditary character, which, therefore, claim a more particular attention.

Among these the most common consists of those minor degrees of mental disturbance that pass under the name of eccentricity. Strange, queer, unreasonable as eccentric people often are, even surpassing the insane in their deviations from the line of recognized proprieties, nobody calls them insane. Many of them become unequivocally insane, and it is always difficult to determine the exact period when the transition was completely effected. The difficulty is not lessened by the prevalent disposition to scout at the idea of eccentricity being anything more than singularity, — a mere token of strong indi-

viduality, signifying nothing abnormal. The truth is that, in common with affections more decidedly morbid, it can often be traced to an hereditary taint. Of course when it passes into insanity all doubt on this point is removed. This transition is made by such insensible gradations as to defeat every attempt to make an absolute distinction between the states, though there are many physicians and jurists who flatter themselves that they have accomplished this feat.

There are many other mental peculiarities not usually considered as abnormal, which no less surely reveal the hereditary evil. In families where insanity prevails, the practised observer readily discerns the signs of the morbid tendency in peculiar modes of thought and feeling, in a disregard of logical distinctions, in irrelevant suggestions, in unusual forms of expression, in ways and manners more original than natural, and in a singular lack of plain common sense, associated perhaps with every grace and gift. For the first time by any English writer, this mental condition has been described, and designated as the *insane temperament*, in a recent work, which, with all its faults, — and they are many and serious, — abounds in original and vigorous thought. "He has," says Maudsley, alluding in general terms to a person exhibiting this kind of heritage, "a native constitution of nervous element, which, whatever name we give it, is unstable or defective, rendering him unequal to bear the severe stress of adverse events. In other words, the man has the insane temperament; he is liable to whims, caprices of thought and feeling; and though he may act calmly and soberly for the most part, yet now and then his unconscious nature, overpowering and surprising him, instigates eccentric or extravagant activity, while an extraordinary and trying emergency may upset his stability entirely."

Another frequent manifestation of the hereditary evil consists in alternate exaltation and depression. In the former state every prospect is bright, every undertaking promises success, and every scene is tinged with roseate hues. In a few weeks or months, or it may be years, the whole face of things has changed. All that abundant self-confidence has fled. Nothing hopeful, nothing cheerful, sends a gleam of light through the darkness that envelopes the soul, and the duties

of life are pursued with unvaried weariness and pain. In process of time, under the wear and tear of daily trial, the exaltation may become high excitement, the depression be accompanied by a tendency to suicide, and the line fairly passed that separates sanity from insanity.

Again, the abnormal state is shown in an habitual distrust and suspicion of everybody else, amounting almost to a fixed belief on the part of the subject that he is purposely thwarted at every turn. In cases of this description, the slightest pretext is sufficient for misconstruing the acts even of the best friends, while the most simple and natural things are twisted into signs of hostility or opposition. The subjects of such delusions live and move under a persistent impression that they are the victims of great injustice; that, while the smiles of Providence and the favor of men are freely bestowed on others no better than themselves, their merits are unacknowledged, and they are slighted and despised. In fact, the rewards bestowed on others are apt to be regarded as a personal affront to themselves, and at times the restraints of prudence and regard for propriety are cast away, and the pent-up feelings of the heart break forth in words of wrath and bitterness.

In another class of persons we observe an extreme susceptibility to every obstacle and trial that comes in their way. While the sea is smooth and the winds fair, their course is quiet and hopeful; but let the slightest adversity befall them, and their sky becomes overcast, and there is no longer any hope or comfort for them. The least opposition to their plans or purposes excites a storm of passion, ending, perhaps, in scenes of violence and blood. Though they may be correct in their morals and pleasing in their manners, they prove to be uncomfortable neighbors, and in the midst of their own families they are feared rather than loved. In the world they pass for men of ungovernable tempers, and, when brought into judgment for their acts of violence, they get no indulgence on the score of abnormal inability to control their passions.

Others there are who give no sign of mental imperfection until they commit some terrible deed entirely opposed to their habitual character, with no apparent or adequate motive, or for

reasons so contrary to all true sense of moral and legal propriety as to raise the suspicion of insanity. Thus a person of blameless life is converted, almost in the twinkling of an eye, into a very monster of wickedness. He may undertake to explain and justify his conduct, but his reasons are so opposed to ordinary modes of thinking and feeling as to indicate, at the very least, an extreme confusion of moral distinctions.

No part of the mental economy suffers more severely from hereditary disease than that which consists of the appetites, affections, and emotions. In insanity generally, the moral powers participate in the mental disorder in a far greater degree than is usually supposed. "This moral alienation is so constant," says Esquirol, "that it seems to be an essential character of insanity. There are those among the insane in whom intellectual aberration is hardly perceptible; but there are none whose passions and moral affections are not disordered, perverted, or annulled." There are people in whom a proclivity to mischief predominates over every other sentiment. Cursed, it may be, with the vilest passions, they are determined to indulge them at whatever cost. Nothing delights them more than to stir up strife and mar the comfort of those around them. They lie, they steal, they are without kindness or natural affection. Many of them begin in early life to manifest a moral disorder, which, not flagrant at first, grows with advancing years. They are indolent, fickle, steady to no pursuit, addicted to low vices, quarrelsome, passionate, violent. How many families in which the purest morality and religion have always been carefully and steadily inculcated, are afflicted with members of this description! They are generally keen, cunning, abounding in resources; and to the world at large they seem to differ from other people only in their superior capacity for mischief. The medical inquirer, however, believing that such characters do not appear by chance, but are the result of some organic law, searches until he finds, if not the law itself, at least the path that leads to it. He observes actual insanity in other members of the family, or ascertains that a parent was hysterical or epileptic, or, in common phraseology, "highly nervous," and here he sees the effect of the inexorable law of heredity.

Lest a general description might fail to convey an adequate conception of this class of cases, we will give the particulars of one, which we take from Moreau.

A., aged twenty-eight, was admitted to the hospital of Bicêtre. His father was a man of the worst character, intemperate, given to every excess, and finally died insane. A paternal uncle was insane, a paternal aunt was completely blind, another was nearly so, and also suffered much from vertigo. A. has every appearance of being sane. When told that he was considered insane, he admitted that he had been guilty of some extravagances and that he could exercise no self-restraint; that he would stick at nothing to gratify the slightest desire; that shame, dishonor, and death were nothing to him; that he ought not to go at large, and that he was just where he ought to be. This man's whole life has been one continual revolt against society. Not an instinct, desire, or passion has found a counterpoise either in that simple common sense which restrains the most perverse from doing what is manifestly contrary to their own interests, or in that inward voice which, from the innermost recesses of the soul, raises its protest against wrong-doing. Wilful, angry, and vindictive, when a child, he wanted every forbidden thing, and would eat or drink whatever came in his way, at the risk of being poisoned. When only three years old, being unable to open a door that led to a neighbor's house where he was in the habit of going, he jumped out of the window and was taken up for dead. His parents, unable to manage him, placed him at a boarding-school, in the hope that strangers might have some control over him. Here he behaved worse than ever before, and was sent home. Once, when his grandmother visited him, he begged her to take him away, and on her refusal, he picked up a stone and hurled it at her head, wounding her severely. On being reprimanded for his conduct, he not only manifested no penitence, but regretted that he had not injured her more. As he grew up the little wretch became more and more terrible. At school, he stole from his comrades, beat them, and made himself a perfect pest. Between his twelfth and eighteenth year, he was put to several trades, but every master drove him out of the house for theft or other miscon-

duct. At eighteen he enlisted in the army, and while in active service behaved very creditably; but in time of peace he was often in trouble, going about, sword in hand, to revenge his fancied wrongs. He underwent many painful punishments, which, however, made him no better. Having assaulted an officer, he was condemned to death. On hearing the sentence, he said, "It is time for this to stop. Let them kill me; I shall thus get rid of myself." The punishment was commuted for ten years' imprisonment. After serving out his sentence, he became unequivocally insane, and was sent to Bicètre.

To cases like this — which we have given, not because it is strange and extraordinary, but because it represents a form of mental disorder very common and very much misunderstood — it is objected, chiefly by those whose notions of morbid psychology have not been derived from the wards of a hospital, that they indicate unruly passions, defective training, anything, in fact, rather than an abnormal condition of mind. In replying to such objections in the present case, Moreau points to the antecedents of the family, and his own fate, and takes occasion to remark upon the difficulty experienced by the observer, in this class of cases, in communicating his impressions to others in all their force and vividness. "It is only by incessant personal observation of such cases, by day and by night, by watching their most trifling acts and prying into their thoughts, by inquiring of those around them, especially of their companions, — towards whom they act freely and naturally, — by identifying one's self, so to speak, with them, that we can succeed in obtaining an exact idea of their mental state, and comprehending to what extent their thoughts, desires, will, and actions are controlled by an irresistible, fatal, automatic influence, in spite of the specious appearance which covers them with a false varnish of reason, moral liberty, and all the essential attributes of man truly worthy of the name." This remark by one who has spent his life among the insane, and brought to the study of their disorders all the resources of a sagacious and comprehensive mind, deserves to be carefully pondered by all who imagine that insanity is a superficial thing, requiring only the smallest modicum of common sense to be understood well enough for any judicial purpose. We may add, as a sort

of corollary to the above remark, that, while many an insane person may betray his mental condition by no single extravagance of thought or action, and, as long as no special pains are taken to expose his defects, may pass for a model of shrewdness, yet the practised eye, familiar with the physiognomy of mental disorder, will often detect the morbid element in the turn of thought, in the mode of action, in the style of reasoning, and in the play of feeling; and the skilful observer might be as little able to give a reason for his belief satisfactory to others, as to give one for believing that a certain face was remarkably handsome, or that a person he had just passed on the street was fresh from Ireland or Germany.

The forms in which the transmitted tendency is displayed are as various as the characters of men and the conditions of morbid action. We have selected a few by way of illustration, and we pause for a moment to direct the reader's attention to the practical lesson which they teach, viz. that the mental condition cannot always be expressed by the simple term *sanity* or *insanity*. And yet this is what the common sentiment on the subject implicitly requires. It recognizes no intermediate state. It admits no obscure, no indefinable deviations from the line of perfect soundness. Unless the expert can say, unhesitatingly and without qualification, that the person is insane, he is supposed to be endowed with the full measure of moral and legal responsibility. No account is to be made of abnormal traits of character which, however quiet and unobtrusive, may determine the conduct by a force as irresistible as that exerted by overt disease. In the common apprehension, insanity is something that may be handled, measured, weighed; and it is made an occasion of reproach to physicians, that they are unable to define it. The perpetual straining after an unexceptionable definition of insanity is as far from success as it was a thousand years ago; and the ever-beginning, never-ending attempts of the courts to establish a test of responsibility only furnish an indication of the false conceptions of this disease that still hold almost undisputed sway over the opinions alike of the wise and the foolish. The able, untiring expert, after spending many years in close observation of the insane, under the circumstances best fitted to

reveal their inmost thoughts, is, after all, scarcely more impressed by what he has learned than by what remains to be learned; but the judge, destitute of all such experience, and, consequently, of all self-distrust, calls the person to his side, converses with him a few moments, pronounces him sane, and discharges him from restraint. The transaction has in it a touch of the ludicrous; but it fairly illustrates how completely even men of culture have failed to comprehend the true character of mental disease. No one who watches the administration of the law, either here or in England, can help seeing that insanity is almost universally supposed to be something loud, noisy, fearful, foolish, or, at the very least, a constant and obvious irregularity or aberration of the mental faculties. Vagaries short of actual raving are simply regarded as very like the freaks of a singular and original character; and it is true that even the grossest delusions may be paralleled by some bold and extravagant conceptions of men who pass for striking examples of mental integrity and power. Of course it could hardly be expected that the sudden transformation of the hereditary tendency into overt, unmistakable disease would be readily admitted as a scientific fact, or that any mental manifestations would be allowed to pass for insanity which were only an exaggeration of traits natural to the individual, or, at the worst, mere eccentricities.

In any question of hereditary tendency, it should not be forgotten that the organic change implied in it may proceed very far without producing any obvious mental disturbance. In this respect cerebral affections follow the law of other diseases. In *post-mortem* examinations, we not unfrequently find extensive lesions of structure which were scarcely suspected during life, or which manifested their legitimate effect only towards the very last. It is not so very strange, therefore, in view of such facts, that suicide, or homicide, or a grievous assault, should sometimes be the first positive indication of cerebral disorder. And yet it has been warmly contended that a criminal act committed under such circumstances cannot properly be admitted in proof of insanity. It is enough to say, on this point, that in every hospital for the insane may be found patients whose derangement was first manifested by acts of this

kind. The order in which the manifestations of insanity appear is governed by no invariable rule of succession. There is nothing in the nature of things to prevent suicide or murder from being the first symptom of insanity. It may as naturally take precedence of all other symptoms, as a fit of abstraction, a foolish bargain, a groundless suspicion, or a gross delusion.

Thus far we have only considered those results of the neuropathic element which are obviously of a pathological nature. In the further development of his doctrine, M. Moreau advances another step, and contends for the essential identity of the organic conditions that constitute the starting-point of insanity and other cerebral affections, and of those on which depend such considerable deviations from the ordinary line of thought as ecstasy, theosophy, mysticism, and all the various forms of religious and political fanaticism. Hitherto our philosophies have been disposed to assign the origin of some of these to high mental endowments, worthy, perhaps, of admiration and imitation, while the subjects of them have been held up on the historian's page among the shining lights in the pathway of the race. In such characters as Saint Theresa and Madame Guyon, the psychological observer, while rendering homage to their exalted aspirations, discerns beneath an abnormal excitation of the nerve-cells of the brain, very different from that kind and degree of excitation which attend unqualified health. Those raptures which absorb all the faculties of the soul and defy all control, that intimate communion with the great objects of human worship which spurns all the bonds of flesh and sense, that divine afflatus which breathes into every pore and fills every channel of their spiritual being, — all these are remarkably like the phenomena of insanity, and are undoubtedly derived from the same nervous condition. The fact signifies nothing derogatory to this class of endowments, beyond denying to them a supernatural origin. Like all other mental manifestations, they are connected with certain physical conditions, which present to our apprehension no grades of honor or dishonor. In the founders of religious systems that have swept whole communities into their embrace — the Mohammeds, Joe Smiths, and many whose names the world is not yet willing to see in such

a connection — we discern the influence of a like psychological condition. In those political enthusiasts whose bloody deeds have brought upon them a load of infamy, — men of the type of Jacques Clément, Jean Châtel, Damiens, Felton, Wilkes Booth, — we cannot overlook the presence and the commanding influence of an abnormal element. Now, in all these classes, we shall find in the history of the individuals circumstances that amply corroborate the conclusions drawn from analogy. In their habits of abstraction and revery, in their persistent revolving of certain notions until they become fixed ideas, in their constant feeling of subjection to motives and influences more sacred and imperative than those that govern the conduct of ordinary mortals, in their lofty disregard of all considerations prompted by the softer sentiments, in the irresistible agency that forces them to work out their fancied mission, in their steadfast resolution even after all is lost, in the insensibility to pain with which they meet the extreme consequences of their acts, — traits which are all more or less manifested by them, — they show their affinity to the unequivocally insane, who are only a step or two beyond them in the development of the morbid tendency.

The next step in this inquiry brings us to the gist of our author's doctrine. Indeed, the following statement of it constitutes the "argument" of the book: "The mental dispositions which distinguish one man from another by the originality of his thoughts and conceptions, by the eccentricity or energy of his effective faculties, or the transcendency of his intellect, originate in the same organic conditions as those mental troubles of which madness and idiocy are the complete expression." Much as we should like to discuss this question, our limits will oblige us barely to indicate the general course of the inquiry.

The organic condition signified by the manifestation of hereditary predisposition implies also a state of superexcitation, or increased vitality, in the nervous system. Thus affected, the organs necessarily act with a force unknown to their normal state, like an engine suddenly subjected to a higher pressure of steam. What then is the result of superactivity of the organ charged with the manifestation

of the thinking faculty? Evidently a greater flow of ideas, more rapid conception, a bolder dash of imagination, more originality of thought, greater variety of associations, increased vivacity of memory, superior energy, and a wider sway of the instincts and affections. In producing this superexcitation of the nervous functions, heredity acts like all the other agencies that modify the nervous power. If it passes certain limits, if it controls the *moi*, — the inward principle destined to unite and combine the action of the different intellectual powers, — then, instead of increasing the vigor and sweep of the mental faculties, it leads directly to insanity. The general principle involved in this statement is far from being new. From the earliest times, observers have noticed that diseases and other abnormal conditions of the brain are sometimes accompanied by extraordinary displays of intellectual power. The books abound with cases where blows and falls on the head, attacks of fever, the approach of cerebral lesions, the incubation of insanity, have produced a remarkable revival of memory, a quickness of perception, an exaltation of the imagination, quite foreign to the patient's usual condition. In insanity such things are of frequent occurrence. No one conversant with the disease can have failed to witness among its phenomena intellectual displays far beyond the normal range of the patient's powers. Many make verses who never did before; some accomplish mechanical inventions for the first time in their lives; some, to whom writing was always distasteful, write treatises or essays; and some apply themselves to music or painting who never thought of such a thing before. The true signification of such facts cannot be mistaken. The same change in the cellular structure which has produced insanity has simultaneously enlarged the power and compass of the mental faculties. Indeed, the notion of an intimate connection between the highest forms of intellectual power and mental disorder has prevailed so extensively that we can scarcely resist the conviction of its being founded on fact. "No great genius without a mixture of madness," says Aristotle. "The extreme mind is near to extreme madness," says Pascal. "Of what is the most subtle folly made, but of the greatest wisdom?" asks Montaigne. "Genius bears within itself a prin-

ciple of destruction, of death, of madness," says Lamartine. "Ten vibrations instead of five may transform an ordinary man into a prodigy," says Broussais.

"Great wits are sure to madness near allied,"

says Dryden.

A few of those favored mortals who have achieved illustrious names in literature or art have given us a glimpse of the working of the wondrous mechanism by which the highest forms of thought are evolved, and from that we learn that the process is not entirely independent of physical movements. "When I apply myself with attention," says Metastasio, "the nerves of my sensorium are put into a violent tumult; I grow as red as a drunkard, and am obliged to quit my work." "Contemplate your subject long," says Buffon; "it will gradually unfold, till a sort of electric spark convulses for a moment the brain, and spreads down to the very heart a glow of irritation." Rousseau tells us that when the first idea of one of his works flashed upon his mind, he experienced a nervous movement that approached to a slight delirium. Descartes, amid those reveries of his youth which led to the grand achievements of his maturer years, heard a voice in the air that called him to pursue the truth. Sir Joshua Reynolds said that, when walking abroad after a morning's work at his art, the trees seemed to him like men walking. Paulus Jovius, describing one of the Italian improvisatori, says: "His eyes, fixed downwards, kindle as he gives utterance to his effusions, the moist drops flow down his cheeks, the veins of his forehead swell, and wonderfully his learned ear, as it were abstracted and intent, moderates each impulse of his flowing numbers."

In connection with this class of facts, it is worthy of notice, because it testifies to the same general truth, that precocious children die young of diseases that originate in the brain, and no sound pathologist mistakes the cause for the effect.

From all this the conclusion is fairly drawn, we think, that in that intellectual process by which thoughts of singular beauty and power come forth unbidden, as it were by an automatic impulse, there is unusual excitation of the nerve-cells of the brain. But this is not enough for M. Moreau. He believes, if we do not mistake his meaning, — which is not so clearly ex-

pressed as it might be, — that this peculiar organic condition, which readily passes into disease, is essential to the highest forms of intellectual effort. In this view of the matter no account is made of original endowment. Uninspired by this abnormal activity of the cells, the conceptions of a Shakespeare, a Newton, or a Cuvier would have scarcely been distinguished from those of ordinary mortals. Our author expressly declares that the old saying, *mens sana in corpore sano*, is wrong, and that, so long as the "normal state of the organism is generally in accordance with the regular action of the thinking faculty, we shall never, or only exceptionally, see the intelligence rising above an honorable mediocrity." This, of course, is at variance with the doctrine now generally accepted, we believe, by physiologists, that the mental power and excellence displayed by any individual depends chiefly on the size of the brain, the proportion of its parts to one another, and the quality of its elementary materials. Even Moreau himself declares that "certain intrinsic qualities which are the very essence of organization" constitute the "most important condition necessary to the highest grade of cerebral activity." This remarkable conclusion originates in what we deem to be an error in a matter of fact, — that of regarding the nervous superexcitation that leads to disease as identical with that which gives rise to the happiest working of the cerebral mechanism. The proof of such identity is wanting. Much that M. Moreau considers as proof merely indicates an accidental connection. In a collection of Biographical Facts, he has presented a fearful array of celebrated characters who had either been afflicted with some cerebral troubles, or who numbered among their progenitors or descendants one or more whom this misfortune had befallen. Such facts, however, only show that those most highly as well as those most humbly endowed with mental gifts are not exempted from the assaults of disease. Why should they be? Nor do we see why we should abandon the old distinction between healthy and morbid excitement. The kind of nervous excitation which inspires the grand conceptions of the poet or artist is as different from that which is the prelude of disorder, as the ruddy glow of health in the cheek is from the hectic of consumption. It is a gratui-

tous supposition that the morbid element necessary to one is also present in the other, and yet this is the corner-stone of our author's theory of great genius. No doubt many distinguished men have been afflicted with some kind of cerebral ailment, but they are greatly outnumbered by those in whom no sign of mental disorder was ever witnessed. The objection is hardly evaded by saying that the organic condition which prepares the mind for its most brilliant triumphs becomes disease only when pushed beyond a certain point, because it is admitted by all that the morbid principle is a pre-existent necessity of insanity, and, consequently, by the terms of the argument, as quoted above, it must precede, not follow, the manifestation of genius.

We offer these few remarks rather to indicate our dissent from the author's views on this point, than as furnishing a reply worthy of their importance and of the ability with which they are maintained. Let it not be supposed that he fails to support them with reasons that cannot but instruct, though they may not convince. It would be difficult to find a work on the subject of insanity more strongly characterized by that scientific sagacity which catches the highest significance of facts, and by an intimate knowledge of the workings of the disordered mind.

J. Ray.

Art. II. — A Chapter of Erie.

Every generation during the last six hundred years, it is currently supposed, has seen something of the animal educated out of the Caucasian type of man. But progress in this direction has been neither so rapid nor so steady as many sanguine believers in the approaching millennium are disposed to hold. Often the old enemy confronts us in a new and more specious form, and experience then steadily teaches us that, in practice, vice by no means loses half its evil in losing all its grossness. Take, for instance, some of the cardinal vices and abuses of the imperfect past. The practice of piracy, it was thought, was battered and hung out of existence when the Barbary Powers and the pirates of the Spanish Main had been finally dealt with. But the freebooters have only transferred their operations to the land, and the commerce of the world is now more severely, though far more equally, taxed through the machinery of rings and tariffs, selfish money combinations at business centres, and the unprincipled corporate control of great lines of railway, than ever it was by depredations outside of the law. Gambling has ceased to be fashionable, and Crockford's doors were closed years ago, so that in this respect too a victory is claimed for an advancing civilization. But this seems to be another error. Gambling is a business now, where formerly it was a disreputable excitement, and is called by some such euphemism as "operating," "financiering," or the like. Again, legislative bribery and corruption were, within memory, looked upon as antiquated misdemeanors, almost peculiar to the unenlightened period that expired with Walpole and Holland, and the revival of them regarded as impossible in the face of modern public opinion. This is a third error. It is no longer the practice of Governments and Ministries to buy legislators; but individuals and corporations have of late not unfrequently found them commodities for sale in the market. So with judicial venality and ruffianism on the bench. Bacon was impeached and Jeffries made infamous for offences against good morals and common decency which a self-satisfied civilization believes incompatible

with its present development. Recent revelations, however, have cast grave doubts on the correctness even of this assumption. Altogether, there is more to be said than is commonly believed in favor of the morality of the past as compared with that of the present day.

No better illustration of the fantastic guises which the worst commonplace evils of history assume, as they meet us in the movements of the day, could be afforded than was seen in the events attending what are known as the Erie wars of the year 1868. Beginning in February and lasting until December, raging fiercely in the late winter and spring, and dying away into a hollow truce at midsummer, only to revive into new and more vigorous life in the autumn, this strange conflict convulsed the money market, occupied the courts, agitated legislatures, and perplexed the country, throughout the entire year. Its history has not been fully written and probably never will be; yet it should not be wholly forgotten. It was something new to see a band of conspirators possess themselves of a road, more important than was ever the Appian Way, and make levies, not only upon it for their own emolument, but, through it, on the whole business of a nation. Nor could it fail to be seen that this was by no means the end, but only the beginning. The American people cannot afford to glance at this thing in the columns of the daily press, and then dismiss it from memory. It involves too many questions; it touches too nearly the national life.

The history of the Erie Railway has been a checkered one. Chartered in 1832, and organized in 1833, the cost of its construction was then estimated at three millions of dollars, of which but one million were subscribed. By the time the first report was made, the estimated cost had increased to six millions, and the work of construction was actually begun on the strength of stock subscriptions of a million and a half, and a loan of three millions from the State. In 1842 the estimated cost had increased to twelve millions and a half, and both means in hand and credit were wholly exhausted. Subscription books were opened, but no names were entered in them; the city of New York was applied to, and refused a loan of its credit; again the legislature was be

sieged, but the aid from this quarter was now hampered with inadmissible conditions; accordingly work was suspended, and the property of the insolvent corporation passed into the hands of assignees. In 1845 the State came again to the rescue; it surrendered all claim to the three millions it had already lent to the company; and one half of their old subscriptions having been given up by the stockholders, and a new subscription of three millions raised, the whole property of the road was mortgaged for three millions more. At last, in 1851, eighteen years after its commencement, the road was opened from Lake Erie to tide-water. Its financial troubles had, however, as yet only begun, for, in 1859, it could not meet the interest on its mortgages, and passed into the hands of a receiver. In 1861 an arrangement of interests was effected, and a new company was organized. The next year the old New York and Erie Railroad Company disappeared under a foreclosure of the fifth mortgage, and the present Erie Railway Company rose from its ashes. Meanwhile the original estimate of three millions had developed into an actual outlay of fifty millions; the 470 miles of track opened in 1842 had expanded into 773 miles in 1868; and the revenue, which the projectors had "confidently" estimated at something less than two millions in 1833, amounted to over five millions when the road passed into the hands of a receiver in 1859, and in 1865 reached the enormous amount of sixteen millions and a half. The road was, in truth, a magnificent enterprise, worthy to connect the great lakes with the great seaport of America. Scaling lofty mountain ranges, running through fertile valleys and by the banks of broad rivers, connecting the Hudson, the Susquehanna, the St. Lawrence, and the Ohio, it stood forth a monument at once of engineering skill and of commercial enterprise.

Some seventeen or eighteen years ago, Mr. Daniel Drew first made his appearance in the Board of Directors of the Erie, where he remained down to the year 1868, generally holding also the office of treasurer of the corporation. Mr. Drew is what is known as a self-made man. Born in the year 1797, as a boy he drove cattle down from his native town of Carmel, in Putnam County, to the market of New York City,

and, subsequently, was for years proprietor of the Bull's Head Tavern. Like his contemporary, and ally or opponent, — as the case might be, — Cornelius Vanderbilt, he built up his fortunes in the steamboat interest, and subsequently extended his operations over the rapidly developing railroad system. Shrewd, unscrupulous, and very illiterate, — a strange combination of superstition and faithlessness, of daring and timidity, — often good-natured and sometimes generous, — he has ever regarded his fiduciary position of director of a railroad as a means of manipulating its stock for his own advantage. For years he has been the leading bear of Wall Street, and his favorite haunts have been the secret recesses of Erie. As treasurer of that corporation, he has, in its frequently recurring hours of need, advanced it sums which it could not have obtained elsewhere, and the obtaining of which was a necessity. His management of his favorite stock has been cunning and recondite, and his ways inscrutable. Those who sought to follow him, and those who sought to oppose him, alike found food for sad reflection; until at last he won for himself the expressive *sobriquet* of the Speculative Director. Sometimes, though rarely, he suffered greatly in the complications of Wall Street; more frequently he inflicted severe damage upon others. On the whole, however, his fortunes had greatly prospered, and the outbreak of the Erie war found him the actual possessor of some millions, and the reputed possessor of many more.

In the spring of 1866 Mr. Drew's manipulations of Erie culminated in an operation which was at the time regarded as a masterpiece, but which subsequent experience has so improved upon that it is now looked on as an ordinary and inartistic piece of financiering. The stock of the road was at that time selling at about 95, and the corporation was, as usual, in debt, and in pressing need of money. As usual, also, it resorted to its treasurer. Mr. Drew stood ready to make the desired advances upon security. Some twenty-eight thousand shares of its own authorized stock, which had never been issued, were at the time in the hands of the company, which also claimed the right, under the statutes of New York, of raising money by the issue of bonds convertible, at the option of the holder, into stock. The twenty-eight thousand unissued shares and

bonds for three millions of dollars, convertible into stock, were placed by the company in the hands of its treasurer, as security for a cash loan of $3,500,000. The negotiation had been quietly effected, and Mr. Drew's campaign now opened. Once more he was short of Erie. While Erie was buoyant,—while it steadily approximated to par,—while speculation was rampant, and that outside public, the delight and the prey of Wall Street, was gradually drawn in by the fascination of amassing wealth without labor,—quietly and stealthily, through his agents and brokers, the grave, desponding operator was daily concluding his contracts for the future delivery of stock at current prices. At last the hour had come. Erie was rising, Erie was scarce, the great bear had many contracts to fulfil, and where was he to find the stock? His victims were not kept long in suspense. Mr. Treasurer Drew laid his hands upon his collateral. In an instant the bonds for three millions were converted into an equivalent amount of capital stock, and fifty-eight thousand shares, dumped, as it were, by the cart-load in Broad Street, made Erie as plenty as even Drew could desire. Before the astonished bulls could rally their faculties, the quotations had fallen from 95 to 50, and they realized that they were hopelessly entrapped.

The whole transaction, of course, was in no respect more creditable than any game, supposed to be one of chance or skill, the result of which is made to depend upon the sorting of a pack of cards, the dosing of a racehorse, or the selling out of his powers by a "walkist." But the gambler, the patron of the turf, or the pedestrian represents, as a rule, no one but himself, and his character is generally so well understood as to be a warning to all the world. The case of the treasurer of a great corporation is different. He occupies a fiduciary position. He is a trustee,—a guardian. Vast interests are confided to his care; every shareholder of the corporation is his ward; if it is a railroad, the community itself is his *cestui que trust*. But passing events, accumulating more thickly with every year, have thoroughly corrupted the public morals on this subject. A directorship in certain great corporations has come to be regarded as a situation in which to make a fortune, the possession of which is no longer dishonorable. The method of accumulation

is both simple and safe. It consists in giving contracts as a trustee to one's self as an individual, or in speculating in the property of one's *cestui que trust*, or in using the funds confided to one's charge, as treasurer or otherwise, to gamble with the real owners of those funds for their own property, and that with cards packed in advance. These proceedings are looked upon as hardly reprehensible. The wards themselves expect their guardians to throw the dice against them for their own property, and are surprised, as well as gratified, if the dice are not loaded.

No acute moral sensibility has, however, for some years troubled either Wall Street or the country at large. As a result of the transaction of 1866, Mr. Drew was looked upon as having effected a surprisingly clever operation, and he retired from the field hated, feared, wealthy, and admired. This episode of Wall Street history took its place as a brilliant success beside the famous Prairie du Chien and Harlem "corners," and, but for subsequent events, would soon have been forgotten. Its close connection, however, with more important though later incidents of Erie history seems likely to preserve its memory. Great events were impending; a new man was looming up in the railroad world, introducing novel ideas and principles, and it could hardly be that the new and old would not come in conflict. Cornelius Vanderbilt, commonly known as Commodore Vanderbilt, was now developing his theory of the management of railroads.

Born in the year 1794, Vanderbilt is a somewhat older man than Drew. There are several points of resemblance in the early lives of the two men, and many points of curious contrast in their characters. Vanderbilt, like Drew, was born in very humble circumstances in the State of New York, and received as little education. He began life by ferrying over passengers and produce from Staten Island to New York. Subsequently, he too laid the foundation of his great fortune in the growing steamboat navigation, and likewise, in due course of time, transferred himself to the railroad interest. When at last, in 1868, the two came into collision as representatives of the old system of railroad management and of the new, they were each of them threescore and ten years of age, and had

both been successful in the accumulation of millions, — Vanderbilt even more so than Drew. They were probably equally unscrupulous and equally selfish; but, while the cast of Drew's mind was sombre and bearish, Vanderbilt was gay and buoyant of temperament, little given to thoughts other than of this world, a lover of horses and of the good things of this life. The first affects prayer-meetings, and the last is a devotee of whist. Drew, in Wall Street, is by temperament a bear, while Vanderbilt could hardly be other than a bull. Vanderbilt must be allowed to be by far the superior man of the two. Drew is astute and full of resources, and at all times a dangerous opponent; but Vanderbilt takes larger, more comprehensive views, and his mind has a vigorous grasp which that of Drew seems to want. While, in short, in a wider field, the one might have made himself a great and successful despot, the other would hardly have aspired to be more than the head of the jobbing department of some corrupt government. Accordingly, while in Drew's connection with the railroad system his operations and manipulations evince no qualities calculated to excite even a vulgar admiration or respect, it is impossible to regard Vanderbilt's methods or aims without recognizing the magnitude of the man's ideas and conceding his abilities. He involuntarily excites feelings of admiration for himself and alarm for the public. His ambition is a great one. It seems to be nothing less than to make himself master in his own right of the great channels of communication which connect the city of New York with the interior of the continent, and to control them as his private property. While Drew has sought only to carry to perfection the old system of operating successfully from the confidential position of director, neither knowing anything nor caring anything for the railroad system except in its connection with the movements of the stock exchange, Vanderbilt has seen the full magnitude of the system, and through it has sought to make himself a dictator in modern civilization, moving forward to this end step by step with a sort of pitiless energy which has seemed to have in it an element of fatality. As trade now dominates the world, and the railways dominate trade, his object has been to make himself the virtual master of all by making himself absolute lord

of the railways. Had he begun his railroad operations with this end in view, complete failure would have been almost certainly his reward. Commencing as he did, however, with a comparatively insignificant objective point, — the cheap purchase of a bankrupt stock, — and developing his ideas as he advanced, his power and his reputation grew, until an end which it would have seemed madness to entertain at first became at last both natural and feasible.

Two great lines of railway traverse the State of New York and connect it with the West, — the Erie and the New York Central. The latter communicates with the city by a great river and by two railroads. To get these two roads — the Harlem and the Hudson River — under his own absolute control, and then, so far as the connection with the Central was concerned, to abolish the river, was Vanderbilt's immediate object. First making himself master of the Harlem Road, he there learned his early lessons in railroad management, and picked up a fortune by the way. A few years ago Harlem had no value. As late as 1860 it sold for 8 or 9 dollars per share; and in January, 1863, when Vanderbilt had got the control, it had risen only to 30. By July of that year it stood at 92, and in August was suddenly raised by a "corner" to 179. The next year witnessed a similar operation. The stock, which sold in January at less than 90, was settled for in June in the neighborhood of 285. On one of these occasions Mr. Drew is reported to have contributed a sum approaching half a million to his rival's wealth. Of late the stock has been floated at about 130. It was in the successful conduct of this first experiment that Vanderbilt showed his very manifest superiority over previous railroad managers. The Harlem was, after all, only a competing line, and competition was proverbially the rock ahead in all railroad enterprise. The success of Vanderbilt with the Harlem depended upon his getting rid of the competition of the Hudson River Railroad. An ordinary manager would have resorted to contracts, which are never carried out, or to opposition, which is apt to be ruinous. Vanderbilt, on the contrary, put an end to competition by buying up the competing line. This he did in the neighborhood of par, and, in due course of time, the stock was sent up to 180. Thus his plans had developed by another step, while, through a judicious course of financiering and watering

and dividing, a new fortune had been secured by him. By this time Vanderbilt's reputation as a railroad manager — as one who earned dividends, invented stock, and created wealth — had become very great, and the managers of the Central brought that road to him, and asked him to do with it as he had done with the Harlem and Hudson River. He accepted the proffered charge, and now, probably, the possibilities of his position and the magnitude of the prize within his grasp at last dawned on his mind. Unconsciously to himself, working more wisely than he knew, he had brought to its logical conclusion the development of one potent element of modern civilization.

Gravitation is the rule, and centralization the natural consequence, in society no less than in physics. Physically, morally, intellectually, in population, wealth, and intelligence, all things tend to consolidation. One singular illustration of this law is almost entirely the growth of this century. Formerly, either governments, or individuals, or, at most, small combinations of individuals, were the originators of all great works of public utility. Within the present century only has democracy found its way into the combinations of capital, small shareholders combining to carry out the most extensive enterprises. And yet already our great corporations are fast emancipating themselves from the state, or rather subjecting the state to their own control, while individual capitalists, who long ago abandoned the attempt to compete with them, will next seek to control them. In this dangerous path of centralization Vanderbilt has taken the latest step in advance. He has combined the natural power of the individual with the factitious power of the corporation. The famous "L'état, c'est moi" of Louis XIV. represents Vanderbilt's position in regard to his railroads. Unconsciously he has introduced Cæsarism into corporate life. He has, however, but pointed out the way which others will tread. The individual will hereafter be engrafted on the corporation,—democracy running its course, and resulting in imperialism; and Vanderbilt is but the precursor of a class of men who will wield within the state a power created by it, but too great for its control. He is the founder of a dynasty.

From the moment Vanderbilt stepped into the management of the Central, but a single effort seemed necessary to give

the new railroad king absolute control over the railroad system, and consequently over the commerce, of New York. By advancing only one step he could securely levy his tolls on the traffic of a continent. Nor could this step have seemed difficult to take. It was but to repeat with the Erie his successful operation with the Hudson River Road. Not only was it a step easy to take, but here again, as so many times before, a new fortune seemed ready to drop into his hand. The Erie might well yield a not less golden harvest than the Central, Hudson River, or Harlem Road; there was indeed but one obstacle in the way, — the plan might not meet the views of the one man who at that time possessed the wealth, cunning, and combination of qualities which could defeat it, that man being the Speculative Director of the Erie, — Mr. Daniel Drew.

The New York Central passed into Vanderbilt's hands in the winter of 1866 – 67, and he marked the Erie for his own in the succeeding autumn. As the annual meeting of the corporation approached, three parties were found in the field contending for control of the road. One party was represented by Drew, and might be called the party in possession, — that which had long ruled the Erie, and made it what it was, — the Scarlet Woman of Wall Street. Next came Vanderbilt, flushed with success, and bent upon his great idea of developing imperialism in corporate life. Lastly a faction made its appearance composed of some shrewd and ambitious Wall Street operators and of certain persons from Boston, who sustained for the occasion the novel character of railroad reformers. This party, it is needless to say, was as unscrupulous and, as the result proved, as able as either of the others; it represented nothing but a raid made upon the Erie treasury in the interest of a thoroughly bankrupt New England corporation of which its members had the control. The history of this corporation, known as the Boston, Hartford, and Erie Railroad, — a projected feeder and connection of the Erie, — would be one curious to read, though very difficult to write. Its name was synonymous with bankruptcy, litigation, fraud, and failure. If the Erie was of doubtful repute in Wall Street, the Boston, Hartford, and Erie had long been of worse than doubtful repute in State Street. Of late years, under able and persevering, if not scrupulous

management, the bankrupt, moribund company had been slowly struggling into new life, and in the spring of 1867 it had obtained, under certain conditions, from the Commonwealth of Massachusetts, a subsidy in aid of the construction of the road. One of the conditions imposed obliged the corporation to raise a sum from other sources still larger than that granted by the State. Accordingly, those having the line in charge looked abroad for a victim, and fixed their eyes upon the Erie.

As the election day drew near, Erie was of course for sale. A controlling interest of stockholders stood ready to sell their proxies, with entire impartiality, to any of the three contending parties, or to any man who would pay the market price for them. Nay, more, the attorney of one of the contending parties, as it afterwards appeared, actually sold the proxies of his principal to another of the contestants, and his doing so seemed to excite no serious surprise. Meanwhile the representatives of the Eastern interest played their part to admiration. Taking advantage of some Wall Street complications just then existing between Vanderbilt and Drew, they induced the former to ally himself with them, and the latter saw that his defeat was inevitable. Even at this time the Vanderbilt party contemplated having recourse, if necessary, to the courts, and a petition for an injunction had been prepared, setting forth the details of the "corner" of 1866. On the Sunday preceding the election, Drew, in view of his impending defeat, called upon Vanderbilt. That gentleman thereupon very amicably read to him the legal documents prepared for his benefit, whereupon the ready treasurer at once turned about, and, having hitherto been hampering the Commodore by his bear operations, he now agreed to join hands with him in giving to the market a strong upward tendency. Meanwhile the other parties to the contest were not idle. At the same house, at a later hour in the day, Vanderbilt explained to the Eastern adventurers his new plan of operations, which included the continuance of Drew in his directorship. These gentlemen were puzzled, not to say confounded, by this sudden change of front. An explanation was demanded, some plain language followed, and the parties separated, only to meet again at a later hour at the house of Drew. There Vanderbilt brought the new men to

terms by proposing to Drew a bold *coup de main*, calculated to throw them entirely out of the direction. Before the parties separated that night, a written agreement had been entered into, providing that, to save appearances, the new board should be elected without Drew, but that immediately thereafter a vacancy should be created, and Drew chosen to fill it. He was therefore to go in as one of two directors in the Vanderbilt interest, that gentleman's nephew, Mr. Work, being the other.

This programme was faithfully carried out, and on the 2d of October Wall Street was at once astonished by the news of the defeat of the notorious leader of the bears, and bewildered by the immediate resignation of a member of the new board and the election of Drew in his place. Apparently he had given in his submission, the one obstacle to success was removed, and the ever-victorious Commodore had now but to close his fingers on his new prize. Virtual consolidation in the Vanderbilt interest seemed a foregone conclusion.

The reinstalment of Drew was followed by a period of hollow truce. A combination of capitalists, in pursuance of an arrangement already referred to, took advantage of this to transfer as much as possible of the spare cash of the "outside public" from its pockets to their own. A "pool" was formed, in view of the depressed condition of Erie, and Drew was left to manipulate the market for the advantage of those whom it might concern. The result of the Speculative Director's operations supplied a curious commentary on the ethics of the stock exchange, and made it questionable whether the ancient adage as to honor extends to its combinations. One contributor to the "pool," in this instance, was Mr. ——, a friend of Vanderbilt. The ways of Mr. Drew were, as usual, past finding out; Mr. ——, however, grew impatient of waiting for the anticipated rise in Erie, and it occurred to him that, besides participating in the profits of the "pool," he might as well turn an honest penny by collateral operations on his own account, looking to the expected rise. Before embarking on his independent venture, however, he consulted Mr. Drew, it is said, who entirely declined to express any judgment as to the venture, but at the same time agreed to loan Mr. —— out of the

"pool" any moneys he might require upon the security usual in such cases. Mr. —— availed himself of the means thus put at his disposal, and laid in a private stock of Erie. The expected rise, however, still did not take place. Again he applied to Mr. Drew for information, but with no better success than before; and again, tempted by the cheapness of Erie, he borrowed further funds of the "pool," and made new purchases of stock. At last the long-continued depression of Erie aroused a dreadful suspicion in the bull operator, and inquiries were set on foot. He then discovered, to his astonishment and horror, that his stock had come to him through certain of the brokers of Mr. Drew. The members of the "pool" were at once called together, and Mr. Drew was appealed to on behalf of Mr. ——. It was suggested to him that it would be well to run Erie up to aid a confederate. Thereupon, with all the coolness imaginable, Mr. Drew announced that the "pool" had no Erie and wanted no Erie; that it had sold out its Erie and had realized large profits, which he now proposed to divide. Thereafter who could pretend to understand Daniel Drew? who could fail to appreciate the humors of Wall Street? The controller of the "pool" had actually lent the money of the "pool" to one of the members of the "pool," to enable him to buy up the stock of the "pool"; and having thus quietly saddled him with it, the controller proceeded to divide the profits, and calmly returned to the victim a portion of his own money as his share of the proceeds. Yet, strange to say, Mr. —— wholly failed to see the humorous side of the transaction, and actually feigned great indignation.

This, however, was a mere sportive interlude between the graver scenes of the drama. The real conflict was now impending. Commodore Vanderbilt stretched out his hand to grasp Erie. Erie was to be isolated and shut up within the limits of New York; it was to be given over, bound hand and foot, to the lord of the Central. To perfect this programme, the representatives of all the competing lines met, and a proposition was submitted to the Erie party looking to a practical consolidation and a division among the contracting parties of the earnings from the New York City travel. A new illustration was thus

to be afforded, at the expense of the trade and travel to and from the heart of a continent, of George Stephenson's famous aphorism, that where combination is possible competition is impossible. The Erie party, however, represented that their road earned more than half of the fund of which they were to receive only one third. They remonstrated and proposed modifications, but their opponents were inexorable. The terms were too hard; the conference led to no result, and the war broke out afresh.

Then Vanderbilt, foiled in his attempt, went into Wall Street, prepared to make himself master of the Erie, as before he had made himself master of the Hudson River Road. The task in itself was one of magnitude. The volume of stock was immense; all of it was upon the street, and the necessary expenditure involved many millions of dollars. The peculiar difficulty of the task, however, lay in the fact that it had to be undertaken in the face of antagonists so bold, so subtle, so unscrupulous, so thoroughly acquainted with Erie, as well as so familiar with all the devices and tricks of fence of Wall Street.

The first open hostilities took place on the 17th of February. For some time Wall Street had been agitated with forebodings of the coming hostilities, but not until that day was recourse had to the courts. Vanderbilt had two ends in view when he sought to avail himself of the processes of law. In the first place, Drew's long connection with Erie, and especially the unsettled transactions arising out of the famous corner of 1866, afforded admirable ground for annoying offensive operations; and, in the second place, these very proceedings, by throwing his opponent on the defensive, afforded an excellent cover for Vanderbilt's own transactions in Wall Street. It was essential to his success to corner Drew, but to corner Drew at all was not easy, and to corner him in Erie was difficult indeed. Experiences since the 1st of January of this year, no less than the memories of 1866, had fully warned the public how manifold and ingenious were the expedients through which the cunning treasurer furnished himself with Erie, when the exigencies of his position demanded fresh supplies. It was, therefore, very necessary for Vanderbilt that he should, while buying Erie up with one hand in Wall Street, with the other close, so far as he

could, that apparently inexhaustible spring from which such generous supplies of new stock were wont to flow. Accordingly, on the 17th of February, Mr. Frank Work, the only remaining representative of the Vanderbilt faction in the Erie direction, accompanied by Mr. Vanderbilt's attorneys, Messrs. Rapallo and Spenser, made his appearance before Judge Barnard, of the Supreme Court of New York, then sitting in chambers, and applied for an injunction against Treasurer Drew and his brother directors, restraining them from the payment of interest or principal of the three and a half millions borrowed of the treasurer in 1866, as well as from releasing Drew from any liability or cause of action the company might have against him, pending an investigation of his accounts as treasurer; on the other hand, Drew was to be enjoined from taking any legal steps towards compelling a settlement. A temporary injunction was granted in accordance with the petition, and a further hearing was assigned for the 21st. Two days later, however, — on the 19th of the month — without waiting for the result of the first attack, the same attorneys appeared again before Judge Barnard, and now in the name of the people, acting through the Attorney-General, petitioned for the removal from office of Treasurer Drew. The papers in the case set forth some of the difficulties which beset the Commodore, and exposed the existence of a new fountain of Erie stock. It appeared that there was a recently enacted statute of New York which authorized any railroad company to create and issue its own stock in exchange for the stock of any other road under lease to it. Mr. Drew, the petition then alleged, and certain of his brother directors, had quietly possessed themselves of a worthless road connecting with the Erie, and called the Buffalo, Bradford, and Pittsburg Railroad, and had then, as occasion and their own exigencies required, proceeded to supply themselves with whatever Erie stock they wanted by leasing their own road to the road of which they were directors, and then creating stock and issuing it to themselves, in exchange, under the authority vested in them by law. The history of this transaction affords, indeed, a most happy illustration of brilliant railroad financiering. The road cost the purchasers, as financiers, some $250,000; as proprietors, they

then issued in its name bonds for two millions of dollars, payable to one of themselves, who now figured as trustee. This person then, shifting his character, drew up, as counsel for both parties, a contract leasing this road to the Erie Railway for four hundred and ninety-nine years, the Erie agreeing to assume the bonds; reappearing in their original character of Erie directors, these gentlemen then ratified the lease, and thereafter it only remained for them to relapse into the role of financiers, and to divide the proceeds. All this was happily accomplished, and the Erie Railway lost and some one gained $140,000 a year by the bargain. The skilful actors in this much-shifting drama probably proceeded on the familiar theory that exchange is no robbery; and the expedient was certainly ingenious. Commodore Vanderbilt, however, naturally desired to put some limit to the amount of the stock in existence, a majority of which he sought to control. Accordingly it was now further ordered by Mr. Justice Barnard that Mr. Drew should show cause on the 21st why the prayer of the petitioner should not be granted, and meanwhile he was temporarily suspended from his position as treasurer and director.

It was not until the 3d of March, however, that any decisive action was taken by Judge Barnard on either of the petitions before him. Even then that in the name of the Attorney-General was postponed for final hearing until the 10th of the month; but on the application of Work an injunction was issued restraining the Erie board from any new issue of capital stock, by conversion of bonds or otherwise, in addition to the 251,058 shares appearing in the previous reports of the road, and forbidding the guaranty by the Erie of the bonds of any connecting line of road. While this last provision of the order was calculated to furnish food for thought to the Boston party, matter for meditation was supplied to Mr. Drew by other clauses, which specially forbade him, his agents, attorneys, or brokers, to have any transactions in Erie, or fulfil any of his contracts already entered into, until he had returned to the company sixty-eight thousand shares of capital stock, which were alleged to be the number involved in the unsettled transaction of 1866, and the more recent Buffalo, Bradford, and Pittsburg exchange.

A final hearing was fixed for the 10th of March on both injunctions.

Things certainly did not now promise well for Treasurer Drew and the bear party. Vanderbilt and the bulls seemed to have it all their own way. If any virtue existed in the processes of law, if any authority was wielded by a New York court, it now seemed as if the very head of the bear faction must needs be converted into a bull in his own despite, and to his manifest ruin. He, in this hour of his trial, was to be forced by his triumphant opponent to make Erie scarce by returning into its treasury sixty-eight thousand shares, — one fourth of its whole capital stock of every description. So far from manufacturing fresh Erie and pouring it into the street, he was to be cornered by a writ, and forced to work his own ruin in obedience to an injunction. Appearances are, however, proverbially deceptive, and all depended on the assumption that some virtue did exist in the processes of law, and that some authority was wielded by a New York court. In spite of the threatening aspect of his affairs, it was very evident that the nerves of Mr. Drew and his associates were not seriously affected. Wall Street watched him with curiosity not unmingled with alarm; for this was a conflict of Titans. Hedged all around with orders of the court, suspended, enjoined, and threatened with all manner of unheard-of processes, with Vanderbilt's wealth standing like a lion in his path, and all Wall Street ready to turn upon him and rend him, — in presence of all these accumulated terrors of the court-room and of the exchange, — the Speculative Director was not less speculative than his wont. He seemed rushing on destruction. Day after day he pursued the same "short" tactics; contract after contract was put out for the future delivery of stock at current prices, and this, too, in the face of a continually rising market. Evidently he did not yet consider himself at the end of his resources.

It was equally evident, however, that he had not much time to lose. It was now the 3d of March, and the anticipated "corner" might be looked for about the 10th. As usual, some light skirmishing took place as a prelude to the heavy shock of decisive battle. The Erie party very freely and openly expressed

a decided lack of respect, and something approaching contempt, for the purity of that particular fragment of the judicial ermine which — figuratively — adorned the person of Mr. Justice Barnard. They did not pretend to conceal their conviction that this magistrate was a piece of the Vanderbilt property, and they very plainly announced their intention of seeking for justice elsewhere. With this end in view they betook themselves to their own town of Binghamton, in the county of Broome, where they duly presented themselves before Mr. Justice Balcom, of the Supreme Court. The existing judicial system of New York divides the State into eight distinct districts, each of which has an independent Supreme Court of four judges, elected by the citizens of that district. The first district alone enjoys five judges, the fifth being the Judge Barnard already referred to. These local judges, however, are clothed with certain equity powers in actions commenced before them which run throughout the State. As one subject of litigation, therefore, might affect many individuals, each of whom might initiate legal proceedings before any of the thirty-three judges, which judge, again, might forbid proceedings before any or all of the other judges, or issue a stay of proceedings in suits already commenced, and then proceed to make orders, to consolidate actions, and to issue process for contempt, — it was not improbable that, sooner or later, strange and disgraceful conflicts of authority would arise, and that the law would fall into contempt.

Taking advantage of the extreme complication in practice of a system so simple in its theory, the Erie party broke ground in a new suit. The injunction was no sooner asked of Judge Balcom than it was granted, and Mr. Frank Work, the Attorney-General, and all other parties litigant, were directed to show cause at Courtlandville on the 7th of March; and meanwhile, Mr. Director Work, accused of being a spy of the enemy in the councils of Erie, was temporarily suspended from his position, and all proceedings in the suits commenced before Judge Barnard were stayed. The moment, however, that this order became known in New York, a new suit was commenced by the Vanderbilt interest in the name of Richard Schell; and Judge Ingraham cried check to the move of Judge Balcom, by

forbidding any meeting of the Erie board, or the transaction of any business by it, unless Director Work was at full liberty to participate therein. The first move of the Drew faction did not seem likely to result in any signal advantage to their cause.

All this, however, was mere skirmishing, and now the decisive engagement was near at hand. The plans of the Erie ring were matured, and, if Commodore Vanderbilt wanted the stock of their road, they were prepared to let him have all that he desired. As usual the Erie treasury was at this time deficient in funds. As usual, also, Daniel Drew stood ready to advance all the funds required on proper security. One kind of security, and only one, the company was disposed at this time to offer, — their convertible bonds under a pledge of conversion. The company could not issue stock outright, in any case, at less than par; its bonds bore interest, and were useless on the street; an issue of convertible bonds was another name for an issue of stock to be sold at market rates. The treasurer readily agreed to find a purchaser, and, in fact, he himself was just then in pressing need of some scores of thousands of shares. Already at the meeting of the Board of Directors, on the 19th of February, a very deceptive account of the condition of the road, jockied out of the general superintendent, had been read and made public; the increased depot facilities, the projected double track, and the everlasting steel rails, had been made to do vigorous duty; and the board had duly authorized the Executive Committee "to borrow such sums as might be necessary, and to issue therefor such security as is provided for in such cases by the laws of this State." Immediately after the Board of Directors adjourned, a meeting of the Executive Committee was held, and a vote to issue at once convertible bonds for ten millions gave a meaning to the very ambiguous language of the directors' resolve; and thus, when apparently on the very threshold of his final triumph, this mighty mass of one hundred thousand shares of new stock was hanging like an avalanche over the head of Vanderbilt.

The Executive Committee had voted to sell the entire amount of these Bonds at not less than 72½. Five millions

were placed upon the market at once, and Mr. Drew's broker became the purchaser, — Mr. Drew giving him a written guaranty against loss and being entitled to any profit that might arise. It was all done in ten minutes after the Committee adjourned, — the bonds issued, their conversion into stock demanded and complied with, and certificates for fifty thousand shares deposited in the broker's safe, subject to the orders of Daniel Drew. There they remained until the 29th, when they were issued, on his requisition, to certain others of that gentleman's army of brokers, much as ammunition might be issued before a general engagement. Three days later came the Barnard injunction, and Erie suddenly rose in the market. Then it was determined to bring up the reserves and let the eager bulls have the other five millions. The history of this second issue was, in all respects, an episode worthy of Erie, and deserves minute relation. It was decided upon on the 3d, but before the bonds were converted Barnard's injunction had been served on every one connected with the Erie Road or with Daniel Drew. The 10th was the return day of the writ, but the Erie operators needed even less time for their deliberations. Monday, the 9th, was settled upon as the day upon which to defeat the impending "corner." The night of Saturday, the 7th, was a busy one in the Erie camp. While one set of counsel and clerks were preparing affidavits and prayers for strange writs and injunctions, the enjoined vice-president of the road was busy at home signing certificates of stock, to be ready for instant use in case a modification of the injunction could be obtained, and another set of counsel was in immediate attendance on the leaders themselves. Mr. Groesbeck, the chief of the Drew brokers, being himself enjoined, secured elsewhere, after one or two failures, a purchaser of the bonds, and took him to the house of the Erie counsel, where Drew and other directors and brokers then were. There the terms of the nominal sale were agreed upon, and a contract drawn up transferring the bonds to this man of straw, — Mr. Groesbeck meanwhile, with the fear of injunctions before his eyes, prudently withdrawing into the next room. After the contract was closed, the purchaser was asked to sign an affidavit setting forth his ownership of the bonds and the refusal of the corpo-

ration to convert them into stock in compliance with their contract, upon which affidavit it was in contemplation to seek from some justice a writ of *mandamus* to compel the Erie Railway to convert them, the necessary papers for such a proceeding being then in course of preparation elsewhere. This the purchaser declined to do. One of the lawyers present then said: "Well, you can make the demand now; here is Mr. Drew, the treasurer of the company, and Mr. Gould, one of the Executive Committee." In accordance with this suggestion a demand for the stock was then made, and, of course, at once refused; thereupon the scruples of the man of straw being all removed, the desired affidavit was signed. All business having now been disposed of, the parties separated; the legal papers were ready, the convertible bonds had been disposed of, and the certificates of stock for which they were to be exchanged were signed in blank and ready for delivery.

Early on Monday morning the Erie people were at work. Mr. Drew, the director and treasurer, had agreed to sell on that day fifty thousand shares of the stock, at 80, to the firms of which Mr. Fisk and Mr. Gould were members, these gentlemen also being Erie directors and members of the Executive Committee. The new certificates, made out in the names of these firms on Saturday night, were in the hands of the secretary of the company, who was strictly enjoined from allowing their issue. On Monday morning this official directed an employee of the road to carry these books of certificates from the West Street office of the company to the transfer clerk in Pine Street, and there to deliver them carefully. The messenger left the room, but immediately returned empty-handed, and informed the astonished secretary that Mr. Fisk had met him outside the door, taken from him the books of unissued certificates, and "run away with them." It was true; — one essential step towards conversion had been taken; the certificates of stock were beyond the control of an injunction. A day or two later the convertible bonds were found upon the secretary's desk, conveyed thither by an unknown hand; the certificates were next seen in Broad Street.

Before launching the bolt thus provided, the conspirators had considered it not unadvisable to cover their proceedings, if they

could, with some form of law. This probably was looked upon as an idle ceremony, but it could do no harm; and perhaps their next step was dictated by what has been called "a decent respect for the opinions of mankind," combined with a profound contempt for judges and courts of law.

Early on the morning of the 9th, Judge Gilbert, a highly respected magistrate of the Second Judicial District, residing in Brooklyn, was waited upon by one of the Erie counsel, who desired to initiate before him a new suit in the Erie litigation, — this time, in the name of the Saturday evening purchaser of bonds and maker of affidavits. A writ of *mandamus* was asked for. This writ clearly did not lie in such a case; the magistrate very properly declined to grant it, and the only wonder is that counsel should have applied for it. New counsel were then hurriedly summoned, and a new petition, in a fresh name, was presented. This petition was for an injunction, in the name of one Belden, the business partner of Mr. Fisk, and the documents then and there presented were probably as eloquent an exposure of the lamentable condition into which the once honored judiciary of New York had fallen as could possibly have been penned. The petition alleged that some time in February certain persons, among whom was especially named George G. Barnard, — the justice of the Supreme Court of the First District, — had entered into a combination to speculate in the stock of the Erie Railway, and to use the process of the courts for the purpose of aiding their speculation; "and that, in furtherance of the plans of this combination," the actions in Work's name had been commenced before Barnard. It is impossible by any criticism to do justice to such audacity as this; the dumb silence of amazement is the only fitting commentary. Apparently, however, nothing that could be stated of his colleague across the river exceeded the belief of Judge Gilbert, for, after some trifling delays and a few objections on the part of the judge to the form of the desired order, the Erie counsel returned to New York with a new injunction, restraining all the parties to all the other suits from further proceedings, and from doing any acts in "furtherance of said conspiracy;" — in one paragraph ordering the Erie directors, except Work, to continue in the dis-

charge of their duties, in direct defiance of the injunction of Judge Ingraham, and in another, with an equal disregard of Judge Barnard, forbidding the directors to desist from converting bonds into stock. Judge Gilbert having, a few hours before signing this wonderful order, refused to issue a writ of *mandamus*, it may be proper to add that the process of equity here resorted to, compelling the performance of various acts, is of recent invention, and is known as a "mandatory injunction."

All was now ready. The Drew party was enjoined in every direction. One magistrate had forbidden them to move, and another magistrate had ordered them not to stand still. If the Erie board held meetings and transacted business, it violated one injunction; if it abstained from so doing, it violated another. By the further conversion of bonds into stock pains and penalties would be incurred at the hands of Judge Barnard; the refusal to convert would be an act of disobedience to Judge Gilbert. Strategically considered, the position could not be improved, and Mr. Drew and his friends were not the men to let the golden moment escape them. At once, before even in New York a new injunction could be obtained, fifty thousand shares of new Erie stock were flung upon the market. That day Erie was buoyant,—Vanderbilt was purchasing. His agents caught at the new stock as eagerly as at the old, and the whole of it was absorbed before its origin was suspected, and almost without a falter in the price. Then the fresh certificates appeared, and the truth became known. Erie had that day opened at 80 and risen rapidly to 83, while its rise even to par was predicted; suddenly it faltered, fell off, and then dropped suddenly to 71. Wall Street had never been subjected to a greater shock, and the market reeled to and fro like a drunken man between the blows of these giants, as they hurled about shares by the tens of thousands, and money by the million. The attempted "corner" was a failure, and Drew was victorious,—no doubt existed on that point. The question now was, could Vanderbilt sustain himself? In spite of all his wealth, must he not go down before his cunning opponent? When night put an end to the conflict, Erie stood at 78, the shock of battle was over, and the astonished

brokers drew breath as they waited for the events of the morrow.

The morning of the 11th found the Erie leaders still transacting business at the office of the corporation in West Street. It would seem that these gentlemen, in spite of the glaring contempt for the process of the courts of which they had been guilty, had made no arrangements for an orderly retreat beyond the jurisdiction of the tribunals they had set at defiance. They were speedily roused from their real or affected tranquillity by trustworthy intelligence that processes for contempt were already issued against them, and that their only chance of escape from incarceration lay in precipitate flight. At ten o'clock the astonished police saw a throng of panic-stricken railway directors — looking more like a frightened gang of thieves, disturbed in the division of their plunder, than like the wealthy representatives of a great corporation — rush headlong from the doors of the Erie office, and dash off in the direction of the Jersey ferry. In their hands were packages and files of papers, and their pockets were crammed with assets and securities. One individual bore away with him in a hackney-coach bales containing six millions of dollars in greenbacks. Other members of the board followed under cover of the night; some of them, not daring to expose themselves to the publicity of a ferry, attempted to cross in open boats concealed by the darkness and a March fog. Two directors, who lingered, were arrested; but a majority of the Executive Committee collected at the Erie station in Jersey City, and there, free from any apprehension of Judge Barnard's pursuing wrath, proceeded to the transaction of business.

Meanwhile, on the other side of the river, Vanderbilt was struggling in the toils. As usual in these Wall Street operations, there was a grim humor in the situation. Had Vanderbilt failed to sustain the market, a financial collapse and panic must have ensued which would have sent him to the wall. He had sustained it, and had absorbed a hundred thousand shares of Erie. Thus when Drew retired to Jersey City he carried with him seven millions of his opponent's money, and the Commodore had freely supplied the enemy with the

sinews of war. He had grasped at Erie for his own sake, and now his opponents promised to rehabilitate and vivify the old line with the money he had furnished them, so as more effectually to compete with the lines which he already possessed. Nor was this all. Had they done as they loudly claimed they meant to do, Vanderbilt might have hugged himself in the faith that, after all, it was but a question of time, and the prize would come to him in the end. He, however, knew well enough that the most pressing need of the Erie people was money with which to fight him. With this he had now furnished them abundantly, and he must have felt that no scruples would prevent their use of it.

Vanderbilt had, however, little leisure to devote to the enjoyment of the humorous side of his position. The situation was alarming. His opponents had carried with them in their flight seven millions in currency, which were withdrawn from circulation. An artificial stringency was thus created in Wall Street, and, while money rose, stocks fell, and unusual margins were called in. Vanderbilt was carrying a fearful load, and the least want of confidence, the faintest sign of faltering, might well bring on a crash. He already had a hundred thousand shares of Erie, not one of which he could sell. He was liable at any time to be called upon to carry as much more as his opponents, skilled by long practice in the manufacture of the article, might see fit to produce. Opposed to him were men who scrupled at nothing, and who knew every in and out of the money market. With every look and every gesture anxiously scrutinized, a position more trying than his then was can hardly be conceived. It is not known from what source he drew the vast sums which enabled him to surmount his difficulties with such apparent ease. His nerve, however, stood him in at least as good stead as his financial resources. Like a great general, in the hour of trial he inspired confidence. While fighting for life he could "talk horse" and play whist. The manner in which he then emerged from his troubles, serene and confident, was as extraordinary as the financial resources he commanded. Such a concentration of power in the hands of a single individual is one significant feature of the times.

Meanwhile, before turning to the tide of battle, which now swept away from the courts of law into the halls of legislation, there are two matters to be disposed of; the division of the spoils is to be recounted, and the old and useless lumber of conflict must be cleared away. The division of the profits accruing to Mr. Treasurer Drew and his associate directors, acting as individuals, was a fit conclusion to the stock issue just described. The bonds for five millions, after their conversion, realized nearly four millions of dollars, of which $3,625,000 passed into the treasury of the company. The trustees of the stockholders had therefore in this case secured a profit for some one of $375,000. Confidence in the good faith of one's kind is very commendable, but possession is nine points of the law. Mr. Fisk, through whom the sales were mainly effected, declined to make any payments in excess of the $3,625,000, until a division of profits was agreed upon. It seems that, by virtue of a paper signed by Mr. Drew as early as the 19th of February, Gould, Fisk, and others were entitled to one half the profits he should make "in certain transactions." What these transactions were, or whether the official action of Directors Gould and Fisk was in any way influenced by the signing of this document, does not appear. Mr. Fisk now gave Mr. Drew, in lieu of cash, his uncertified check for the surplus $375,000 remaining from this transaction, with stock as collateral amounting to about the half of that sum. With this settlement, and the redemption of the collateral, Mr. Drew was fain to be content. Seven months afterwards he still retained possession of the uncertified check, in the payment of which, if presented, he seemed to entertain no great confidence. Everything, however, showed conclusively the advantage of operating from interior lines. While the Erie treasury was once more replete, three of the persons who had been mainly instrumental in filling it had not suffered in the transaction. The treasurer was richer by $180,000 directly, and he himself only knew by how much more incidentally. In like manner his faithful adjutants had profited to an amount as much exceeding $60,000 each as their sagacity had led them to provide for.

As to the useless lumber of conflict, consisting chiefly of the numerous judges of the Supreme Court of New York and their

conflicting processes of law, this can be quickly disposed of. Judge Gilbert was soon out of the field. His process had done its work, and the Erie councillors hardly deigned upon the 18th, which was the day fixed for showing cause, to go over to Brooklyn and listen to indignant denunciations on the part of their Vanderbilt brethren, as, with a very halting explanation of his hasty action, Judge Gilbert peremptorily denied the request for further delay, and refused to continue his injunction. It is due to this magistrate to say, that he is one of the most respected in the State of New York; and when that is said, much is implied in the facts already stated as to his opinion of some of his brother judges. Judicial demoralization can go no further. If Judge Gilbert was out of the fray, however, Judge Barnard was not. The wrath and indignation of this curious product of a system of elective judiciary cannot be described, nor was it capable of utterance. It is unnecessary to go into the details of the strange and revolting scenes which the next few months witnessed in his court-room. It reads like some monstrous parody of the forms of law; some Saturnalia of bench and bar. The magistrate became more partisan than were the paid advocates before him, and all seemed to vie with one another in their efforts to bring their common profession into public contempt. Day and night detectives in the pay of suitors dogged the steps of the magistrate, and their sworn affidavits, filed in his own court, sought to implicate him in an attempt to kidnap Drew by means of armed ruffians, and to bring the fugitive by violence within reach of his process. Then, in retaliation, the judge openly avowed from the bench that his spies had penetrated into the consultations of the litigants, and he astonished a witness by angrily interrogating him as to an affidavit reflecting upon himself, to which that witness had declined to make oath.* At one moment he wept, as counsel detailed before him the story of his own grievances and the insults to which he had

* Question by the Court to Mr. Belden: "Did not Mr. Field send you two or three days ago an affidavit filled with gross abuse of me, and you declined to sign it?"

Witness (producing a paper): "This is the affidavit. I said I would rather not sign it." . . . .

Question by Mr. Field: "Did you show that affidavit to Judge Barnard?"

been subjected, and then again he vindicated his purity with select specimens of Tammany rhetoric.* When the Vanderbilt counsel moved to fix a day on which their opponents should show cause why a receiver of the proceeds of the last over-issue of stock should not be appointed, the Judge astonished the petitioners by outstripping their eagerness, and appointing Vanderbilt's own son-in-law receiver on the spot. One day Mr. John B. Haskin was placed upon the stand, and there ensued a scene which Barnard himself not inaptly characterized the next day as "outrageous and scandalous, and insulting to the court." Upon this occasion the late Mr. James T. Brady and the witness almost had a personal collision in open court; the purity of the presiding magistrate was impugned, and his venality openly implied through a long cross-examination; and the witness acknowledged that he had, in the course of his career, undertaken for money privately to influence the mind of the judge "on the side of right." All the scandals of the practice of the law, and the private immoralities of lawyers, were dragged into the broad light of day; the whole system of favored counsel, of private argument, of referees, and of unblushing extortion, was freely discussed. On a subsequent day the judge himself made inquiries as to a visit of two of the directors to one gentleman supposed to have peculiar influence over the judicial mind, and evinced great familiarity with the negotiations then carried on.† Nor were the lawyers much behind the judge. At one moment they would indulge in personal wrangling, and accuse each other of the grossest malprac-

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Answer: "I did not."

Question: "How then did he learn of its being sent to you?"

Judge Barnard: "He does not know, and never will in this world. I am now doing as other people have been doing; I have been followed by detectives for four or five weeks all over the city, and now I am following others."

* "In this wide city of a million or a million and a half of inhabitants, where a man can be hired for five dollars to swear any man's life away, there is not one so base as to come upon this stand and swear that I had anything to do with any conspiracy."

† Question by the Judge to Mr. Belden: "Do you know whether James Fisk, Jr., and William H. Marston went in a carriage to John J. Crane's house and offered him $50,000 to vacate this injunction; and did you hear from a director of the Erie Railroad that the Executive Committee had allowed that sum to be paid?"

Answer: "No one of the directors told me this; but I think I heard something of the kind. I can't tell from whom I heard it; there were numerous reports flying about at the time."

tice; the next, they would dare any one to enter an order just granted by the court, and threaten the presiding justice with impeachment. All this time injunctions were flying about like hailstones; but the crowning injunction of all was one issued by Judge Clerke, a colleague of Judge Barnard, at the time sitting as a member of the Court of Appeals at Albany, in reference to the appointment of a receiver. The Gilbert injunction had gone, it might have seemed, sufficiently far, in enjoining Barnard the individual, while distinctly disavowing all reference to him in his judicial functions. Judge Clerke made no such exception. He enjoined the individual and he enjoined the judge; he forbade his making any order appointing a receiver, and he forbade the clerks of his court from entering it if it were made, and the receiver from accepting it if it were entered. This extraordinary order, the signing of which by any judge in his senses admits of no explanation, the Erie counsel served upon Judge Barnard as he sat upon the bench, and, having done so, withdrew from the court-room; whereupon the judge immediately proceeded to vacate the order, and to appoint a receiver. This appointment was then entered by a clerk, who had also been enjoined, and the receiver was himself enjoined as soon as he could be caught. Finally the maze had become so intricate, and the whole litigation so evidently endless and aimless, that, by a sort of agreement of parties, Judge Ingraham, another colleague of Judge Barnard, issued a final injunction of universal application, as it were, and to be held inviolable by common consent, under which proceedings were stayed, pending an appeal. It was high time. Judges were becoming very shy of anything connected with the name of Erie, and Judge McCunn had in a lofty tone informed counsel that he preferred to subject himself to the liability of a fine of a thousand dollars rather than, by issuing a writ of *habeas corpus*, to allow his court "to have anything to do with the scandal."

The result of this extraordinary litigation may be summed up in a few words. It had two branches: one, the appointment of a receiver of the proceeds of the hundred thousand shares of stock issued in violation of an injunction; the other, the processes against the persons of the directors for a contempt of

court. As for the receiver, every dollar of the money this officer was intended to receive was well known to be in New Jersey, beyond his reach. Why one party cared to insist on the appointment, or why the other party objected to it, is not very apparent. Mr. Osgood, the son-in-law of Vanderbilt, was appointed, and immediately enjoined from acting; subsequently he resigned, when Mr. Peter B. Sweeney, the head of the Tammany ring, was appointed in his place, without notice to the other side. Of course he had nothing to do, as there was nothing to be done, so he was subsequently allowed by Judge Barnard $150,000 for his services. The contempt cases had even less result than that of the receivership. The settlement subsequently effected between the litigants seemed also to include the courts. The outraged majesty of the law, as represented in the person of Mr. Justice Barnard, was pacified, and everything was explained as having been said and done in a "Pickwickian sense"; so that, when the terms of peace had been arranged between the high contending parties, Barnard's rage by degrees subsided, until at last he ceased to rage at all. The penalty for violating an injunction in the manner described was finally fixed at the not unreasonable sum of ten dollars, except in the cases of Mr. Drew and certain of his more prominent associates; their contumacy his Honor held to be too great to be estimated in money, and so they escaped without any punishment at all. The legal profession alone had cause to regret the cessation of this litigation; and as the Erie counsel had $150,000 divided among them in fees, it may be presumed that even they were finally comforted.

It is now necessary to return to the real field of operations, which had ceased on the morning of the 11th of March to be in the courts of law. As the theatre widened, the proceedings became more complicated and more difficult to trace, embracing as they did the legislatures of two States, neither of them famed for purity. In the first shock of the catastrophe it was actually believed that Commodore Vanderbilt contemplated a resort to open violence and acts of private war. There were intimations that a scheme had been matured for kidnapping certain of the Erie directors, including Mr.

Drew, and bringing them by force within reach of Judge Barnard's process. It appeared that on the 16th of March some fifty individuals, subsequently described, in an affidavit filed for the special benefit of Mr. Justice Barnard, as "disorderly characters, commonly known as roughs," crossed by the Pavonia Ferry and took possession of the Erie depot. From their conversation and inquiries it was divined that they came intending to "copp" Mr. Drew, or, in plainer phraseology, to take him by force to New York, and expected to receive the sum of $50,000 as a reward for so doing. The exiles at once loudly charged Vanderbilt himself with originating this blundering scheme. They simulated intense alarm. From day to day new panics were started, until, on the 19th, Drew was secreted, a standing army was organized from the employees of the road, and a small navy equipped. The alarm spread through Jersey City; the militia was held in readiness; in the evening the stores were closed and the citizens began to arm; while a garrison of about a hundred and twenty-five men intrenched themselves around the directors, in their hotel. On the 21st there was another alarm, and the fears of an attack continued, with lengthening intervals of quiet, until the 31st, when the guard was at last withdrawn. It is impossible to suppose that Vanderbilt ever had any knowledge of this ridiculous episode or of its cause, except through the press. A band of ruffians may have crossed the ferry, intending to kidnap Drew on speculation; but to suppose that the shrewd and energetic Commodore ever sent them over to go gaping about a station, ignorant both of the person and the whereabouts of him they were in search of, would be to impute to Vanderbilt at once a crime and a blunder. Such botching bears no trace of his clean handiwork.

The first serious effort of the Erie party was to intrench itself in New Jersey; and here it met with no opposition. A bill making the Erie Railway Company a corporation of New Jersey, with the same powers they enjoyed in New York, was hurried through the legislature in the space of two hours, and, after a little delay, signed by the Governor; and the astonished citizens of the latter State saw their famous broad-gauge road metamorphosed before their eyes into a denizen

of the kingdom of Camden and Amboy. Here was another dreadful hint to Wall Street. What further issues of stock might become legal under this charter, how the tenure of office of the present Board of Directors might be altered, what curious legal complications might arise, were questions more easily put than satisfactorily answered. The region of possibilities at any rate was considerably extended. The new act of incorporation, however, was but a precaution to secure for the directors of the Erie a retreat in case of need; the real field of conflict lay in the legislature of New York, and here Vanderbilt was first on the ground.

The corruption ingrained in the political system of New York City is supposed to have been steadily creeping into the legislature at Albany during several years past. The press has rung with charges of venality against members of this body; individuals have been pointed out as the recipients of large sums; men have certainly become rich during short terms in office; and, of all the rings which influence New York legislation, the railroad ring is currently supposed to be the most corrupt and corrupting. The mind of the unprejudiced inquirer, who really desires to ascertain the truth on this subject, will probably pass through several phases of belief before settling down into conviction. In the first place, he will be overwhelmed by the broad, sweeping charges advanced in the columns of the press by responsible editors and well-informed correspondents. He will read with astonishment that legislation is controlled by cliques and is openly bought and sold; that the lobby is but the legislative brokers' board, where votes are daily quoted; that sheep and bullocks are not more regularly in the market at Smithfield than Assemblymen and Senators at Albany. Amazed by such statements, the inquirer becomes incredulous, and demands evidence in support of them. This is never forthcoming. Committees of investigation — one or two in a session — are regularly appointed, and their reports are invariably calculated to confound the existing confusion. These committees generally express a belief in the existence of corruption and an utter inability to find it out; against some notoriously venal brother legislator they enter a Scotch verdict of "not proven"; and, having so far

been very guarded in their language, they then launch forth into tremendous denunciations of an unbridled and irresponsible press. Here they have it all their own way, and too often make out an excellent case. Meanwhile the seeker after truth leaves both correspondents and committees, and tries to reach a conclusion by other means. Public rumor he finds to be merely a reflection of the press, or itself the impalpable form which the press reflects. No conviction can be had on such evidence. He finds loose statements, unproved assertions, and unsustained charges, tending to produce general incredulity. Where so much more is alleged than is proved, nothing is finally believed; until individual corruption may be almost measured by an ostentatious disregard of public opinion. Passing through the phase of incredulity, the inquirer may at last resort to the private judgment of the best informed. Appealing to individuals in whose purity, judicial temper, and means of information he has entire confidence, he will probably find his conclusions as discouraging as they are inevitable. The weight of opinion and of evidence gradually becomes irresistible, until his mind settles down into a sad belief that probably no representative bodies were ever more thoroughly venal, more shamelessly corrupt, or more hopelessly beyond the reach of public opinion than are certain of those bodies which legislate for republican America in this latter half of the nineteenth century. Certainly, none of the developments which marked the Erie conflict in the New York legislature of 1868 would tend to throw doubts on this conclusion when once arrived at.

One favorite method of procedure at Albany is through the appointment of committees to investigate the affairs of wealthy corporations. The stock of some great company is manipulated till it fluctuates violently, as was the case with Pacific Mail in 1867. Forthwith some member of the Assembly rises and calls for a committee of investigation. The instant the game is afoot, a rush is made for positions on the committee. The proposer, of course, is a member, probably chairman. The advantages of the position are obvious. The committee constitutes a little temporary outside ring. If a member is corrupt, he has substantial advantages offered

him to influence his action in regard to the report. If he is not open to bribery, he is nevertheless in possession of very valuable information, and an innocent little remark, casually let fall, may lead a son, a brother, or a loving cousin to make very judicious purchases of stock. Altogether, the position is one not to be avoided.

The investigation phase was the first which the Erie struggle assumed at Albany. During the early stages of the conflict, the legislature had scented the carnage from afar. There was "money in it," and the struggle was watched with breathless interest. As early as the 5th of March the subject had been introduced into the State Senate, and an investigation into the circumstances of the company called for. A committee of three was ordered, but the next day a Senator, by name Mattoon, moved to increase the number to five, which was done, he himself being naturally one of the additional members. This committee had its first sitting on the 10th, at the very crisis of the great explosion. But before the investigation was entered upon, Mr. Mattoon thought it expedient to convince the contending parties of his own perfect impartiality and firm determination to hold in check the corrupt impulses of his associates. With this end in view, upon the 9th or the 10th he hurried down to New York, and visited West Street, where he had an interview with the leading Erie directors. He explained to them the corrupt motives which had led to the appointment of the committee, and how his sole object in obtaining an increase of the number had been to put himself in a position in which he might be able to prevent these evil practices and see fair play. Curiously enough, at the same interview, he mentioned that his son was to be appointed an assistant sergeant-at-arms to aid in the investigation, and proved his disinterestedness by mentioning the fact that this son was to serve without pay. The labors of the committee continued until the 31st of March, and during that time Mr. Mattoon, and at least one other Senator, pursued a course of private inquiry which involved further visits to Jersey City. Naturally enough, Mr. Drew and his associates took it into their heads that the man wanted to be bought, and even affirmed subsequently that, at

one interview, he had in pretty broad terms offered himself for sale. It has not been distinctly stated in evidence by any one that an attempt was made on his purity or on that of his public-spirited son; and it is difficult to believe that one who came to New York so full of high purpose could have been sufficiently corrupted by metropolitan influences to receive bribes from both sides. Perhaps improper overtures were made to him, and his indignation thereat influenced his final action in regard to the report of the committee. On the 31st, it seems, the draft of a proposed report, exonerating in great measure the Drew faction, was read to him by an associate, to which he not only made no objection, but which he was even understood to approve. On the same day another report was read in his presence strongly denouncing the Drew faction, sustaining to the fullest extent the charges made against it, and characterizing its conduct as corrupt and disgraceful. Each report was signed by two of his associates, and Mr. Mattoon found himself in the position of holding the balance of power; whichever report he signed would be the report of the committee. To a man of Mr. Mattoon's conscious probity such a position must have been one of terrible responsibility. He expressed a desire to think the matter over. It is natural to suppose, that in his eagerness privately to gain information, Mr. Mattoon had not confined his unofficial visits to the Drew camp. At any rate, his mind was in a state of painful suspense. Throwing the theory of double bribery aside, as unsustained by direct evidence, the other theory, that of offended virtue, will alone account for the fact, that, after arranging in consultation on Tuesday for a report favoring the Drew party, on Wednesday he signed a report strongly denouncing it, and, by so doing, settled the action of the committee. Mr. Jay Gould must have been acquainted with the circumstances of the case, and evidently supposed that Mr. Mattoon was "fixed," as he subsequently declared that he was "astounded" when he heard that Mr. Mattoon had signed this report. However, the committee, with their patriotic sergeant-at-arms, whose services, by the way, cost the State but a hundred dollars, desisted at length from their labors, the result of which was one more point gained by Commodore Vanderbilt.

Indeed Vanderbilt had thus far as much outgeneralled Drew in the manufacture of public opinion, as Drew had outgeneralled Vanderbilt in the manufacture of Erie stock. His whole scheme was one of monopoly, which was opposed to every interest of the city and State of New York, yet into the support of this scheme he had brought every leading paper of New York City, with a single exception. Now again he seemed to have it all his own way in the legislature, and the tide ran strongly against the exiles of Erie. The report of the investigation committee was signed on April 1st, and may be considered as marking the high-water point of Vanderbilt's success. Hitherto the Albany interests of the exiles had been confided to mere agents, and had not prospered; but when fairly roused by a sense of danger, the Drew party showed at least as great a familiarity with the tactics of Albany as with those of Wall Street. The moment they felt themselves settled at Jersey City they had gone to work to excite a popular sympathy in their own behalf. The cry of monopoly was a sure card in their hands. They cared no more for the actual welfare of commerce, involved in railroad competition, than they did for the real interests of the Erie Railway; but they judged truly that there was no limit to the extent to which the public might be imposed upon. An active competition with the Vanderbilt roads, by land and water, was inaugurated; fares and freights on the Erie were reduced on an average by one third; sounding proclamations were issued; "interviewers" from the press returned rejoicing from Taylor's Hotel to New York City, and the Jersey shore quaked under the clatter of this Chinese battle. The influence of these tactics made itself felt at once. By the middle of March memorials against monopoly began to flow in at Albany.

While popular sympathy was thus roused by the bribe of active competition, a bill was introduced into the Assembly, in the Erie interest, legalizing the recent issue of new stock, declaring and regulating the power of issuing convertible bonds, providing for a broad-gauge connection with Chicago and the guarantee of the bonds of the Boston, Hartford, and Erie, and finally forbidding, in so far as any legislation could, the consolidation of the Central and the Erie in the hands of Van-

derbilt. This bill was referred to the Committee on Railroads on the 13th of March, and on the 20th a public hearing upon it was begun, and the committee proceeded to take evidence, aided by a long array of opposing counsel, most of whom had figured in the proceedings in the courts of law. In a few days the bill was adversely reported upon, and the report adopted in the Assembly by the decisive vote of eighty-three to thirty-two. This was upon the 27th of March. The hint was a broad one; the exiles must give closer attention to their interests. As soon as the news of this adverse action reached Jersey City, it was decided that Mr. Jay Gould should brave the terrors of the law, and personally superintend matters at Albany. Neither Mr. Drew nor his associates desired to become permanent residents of Jersey City; nor did they wish to return to New York as criminals on their way to jail. Mr. Gould was to pave the way to a different return by getting the recent issue of convertible bonds legalized. That once done, Commodore Vanderbilt was not the man to wage an unavailing war, and a compromise, in which Barnard and his processes of contempt would be thrown in as a makeweight, could easily be effected. A rumor was therefore started that Mr. Gould was to leave for Ohio, supplied with the necessary authority and funds to press vigorously to completion the eighty miles of broad-gauge track between Akron and Toledo, which would open to the Erie the much-coveted connection with Chicago. Having hung out this false light, Mr. Jay Gould went on his mission, the president of the company having sometime previously drawn half a million of dollars out of the overflowing Erie treasury.

This mission was by no means unattended by difficulties. In the first place, Judge Barnard's processes for contempt seemed to threaten the liberty of Mr. Gould's person. He left Jersey City and arrived at Albany on the 30th day of March, three days after the defeat of the Erie bill, and two days before Mr. Mattoon had made up his mind as to which report he would sign. Naturally his opponents were well satisfied with the present aspect of affairs, and saw no benefit likely to arise from Mr. Gould's presence in Albany. The day after his arrival, therefore, he was arrested, on the writ issued against

him for contempt of court, and held to bail in half a million of dollars for his appearance in New York on the following Saturday. He was immediately bailed of course, and for the next few days devoted himself assiduously to the business he had in hand. On Saturday he appeared before Judge Barnard, and was duly put in charge of the sheriff to answer certain interrogatories. It would seem to have been perfectly easy for him to have given the necessary bail, and to have returned from Barnard's presence at once to Albany; but the simple method seems never to have been resorted to throughout these complications: nothing was ever done without the interposition of a writ and the assistance of a crowd of counsel. In this case Judge Barrett of the Common Pleas was appealed to, who issued a writ of *habeas corpus*, by virtue of which Mr. Gould was taken out of the hands of the sheriff and again brought into court. Of course the hearing in the case was deferred, and it was equally a matter of course that Mr. Gould was bent on at once returning to his field of labor. The officer to whose care Mr. Gould was intrusted was especially warned by the court, in Mr. Gould's presence, that he was not to allow his charge to go out of his sight. This difficulty was easily surmounted. Mr. Gould went by an early train to Albany, taking the officer with him in the capacity of a travelling companion. Once in Albany, he was naturally taken ill, — not too ill to go to the Capitol in the midst of a snow-storm, but much too ill to think of returning to New York. On the 10th the trusty official and travelling companion signified to Mr. Gould that his presence was much desired before Judge Barrett, and intimated an intention of carrying him back to New York. Mr. Gould then pleaded the delicate condition of his health, and wholly declined to undergo the hardships of the proposed journey. Whereupon the officer, stimulated, as was alleged, by Gould's opponents, returned alone to New York, and reported his charge to the court as a runaway. A new spectacle of judicial indignation ensued, and a new process for contempt seemed imminent. Of course nothing came of it. A few affidavits from Albany pacified the indignant Barrett. The application for a *habeas corpus* was discharged, and Mr. Gould was theoretically returned into the custody of the sheriff.

Thereupon the required security for his appearance when needed was given; and meanwhile, pending the recovery of his health, he assiduously devoted the tedious hours of convalescence to the task of cultivating a thorough understanding between himself and the members of the legislature.

A strange legislative episode occurred at this time, which threatened for a day or two to thwart Mr. Gould's operations, but in the end materially facilitated them. All through March the usual sensational charges had been flying through the press in relation to the buying of votes on the pending Erie measures. These were as vague and as difficult to sustain as usual, and it was very important that no indiscreet friend of legislative purity should blunder out charges which could be triumphantly refuted. On the 1st of April, however, the second day after Mr. Gould appeared on the ground, a quiet, country member named Glenn, remarkable for nothing but his advanced years and white hair, suddenly created an intense sensation by rising in his place in the Assembly and excitedly declaring that he had just been offered money for his vote on the Erie bill. He then sent up to the Speaker charges in writing, to the effect that the recent report on the rejected Erie bill was bought, that members of the house were engaged in purchasing votes, that reports of committees were habitually sold, and ended by charging "corruption, deep, dark, and damning on a portion of the house," of which he felt "degraded in being a member." A committee of investigation was, of course, appointed, and the press congratulated the public that at last specific charges had been advanced from a responsible quarter. On the 9th, Mr. Glenn followed up the attack by charging, again in writing, that one member of the committee of investigation, whose name he gave, was the very member who had offered him money for his vote. Mr. Frear, the member in question, at once resigned his place upon the committee, and demanded an investigation. Then it turned out that the simple old gentleman, between his desire for notoriety and his eagerness to expose corruption, had been made the victim of a cruel joke. Some waggish colleagues had pointed out to him an itinerant Jew, who haunted the lobby and sold spectacles, as an agent of the fourth estate. From him the old gentleman had, after

some clumsy angling and many leading questions, procured what he supposed to be an offer of money for his vote, which, by a ludicrous misunderstanding, managed by his humorous colleagues, was made to appear in his eyes as having received Mr. Frear's indorsement. Mr. Glenn's charges ended, therefore, in a ridiculous fiasco, and in a tremendous outburst of offended legislative virtue. The committee reported on the 10th; every one was exonerated; Mr. Glenn was brought to the bar and censured, and the next day he resigned. As for the astonished pedler, he was banished from the lobby, imprisoned and prosecuted. The display of indignation on the part of Mr. Glenn's brother legislators was, in view of the manifest absurdity of the whole affair, somewhat superfluous and somewhat suspicious; but one such false accusation protects a multitude of real sins. The trade of censor of morals fell into disrepute at Albany; and, under the shadow of this parody upon exposures of corruption, Mr. Gould was at liberty to devote himself to serious business without fear of interruption.

The full and true history of this legislative campaign will never be known. If the official reports of investigating committees are to be believed, Mr. Gould at about this time underwent a curious psychological metamorphosis, and suddenly became the veriest simpleton in money matters that ever fell into the hands of happy sharpers. Cunning lobby members had but to pretend to an influence over legislative minds, which every one knew they did not possess, to draw unlimited amounts from this verdant *habitué* of Wall Street. It seemed strange that he could have lived so long and learned so little. He dealt in large sums. He gave to one man, in whom he said "he did not take much stock," the sum of $5,000, "just to smooth him over." This man had just before received $5,000 of Erie money from another agent of the company. It would therefore be interesting to know what sums Mr. Gould paid to those individuals in whom he did "take much stock." Another individual is reported to have received $100,000 from one side, "to influence legislation," and to have subsequently received $70,000 from the other side to disappear with the money; which he accordingly did, and thereafter became a gentleman of elegant leisure. One Senator was openly charged in the col-

umns of the press with receiving a bribe of $20,000 from one side, and a second bribe of $15,000 from the other; but Mr. Gould's foggy mental condition only enabled him to be "perfectly astounded" at the action of this Senator, though he knew nothing of any such transactions. Other Senators were blessed with a sudden accession of wealth, but in no case was there any jot or tittle of proof of bribery. Mr. Gould's rooms at the Develin House overflowed with a joyous company, and his checks were numerous and heavy; but why he signed them, or what became of them, he seemed to know less than any man in Albany. This strange and expensive hallucination lasted until about the middle of April, when Mr. Gould was happily restored to his normal condition of a shrewd, acute, energetic man of business; nor is it known that he has since experienced any relapse into financial idiotcy.

About the period of Mr. Gould's arrival in Albany the tide turned, and soon began to flow strongly in favor of Erie and against Vanderbilt. How much of this was due to the skilful manipulations of Gould, and how much to the rising popular feeling against the practical consolidation of competing lines, cannot be decided. The popular protests did indeed pour in by scores, but then again the Erie secret-service money poured out like water. Yet Mr. Gould's task was sufficiently difficult. After the adverse report of the Senate committee, and the decisive defeat of the bill introduced into the Assembly, any favorable legislation seemed almost hopeless. Both houses were committed. Vanderbilt had but to prevent action, to keep things where they were, and the return of his opponents to New York was impracticable, unless with his consent; he appeared, in fact, to be absolute master of the situation. It seemed almost impossible to introduce a bill in the face of his great influence, and to navigate it through the many stages of legislative action and executive approval, without somewhere giving him an opportunity to defeat it. This was the task Gould had before him, and he accomplished it. On the 13th of April a bill, which met the approval of the Erie party, and which Judge Barnard subsequently compared not inaptly to a bill legalizing counterfeit money, was taken up in the Senate; for some days it was warmly debated, and on the 18th

was passed by the decisive vote of seventeen to twelve. Senator Mattoon had not listened to the debate in vain. Perhaps his reason was convinced, perhaps the first anger of offended virtue had subsided; at any rate that incorruptible Senator was found voting with the majority. The bill practically legalized the recent issues of bonds, but made it a felony to use the proceeds of the sale of these bonds except for completing, furthering, and operating the road. The guaranty of the bonds of connecting roads was authorized, all contracts for consolidation or division of receipts between the Erie and the Vanderbilt roads were forbidden, and a clumsy provision was enacted that no stockholder, director, or officer in one of the Vanderbilt roads should be an officer or director in the Erie, and *vice versa*. The bill was, in fact, an amended copy of the one voted down so decisively in the Assembly a few days before, and it was in this body that the tug of war was expected to come.

The lobby was now full of animation; fabulous stories were told of the amounts which the contending parties were willing to expend; never before had the market quotations of votes and influence stood so high. The wealth of Vanderbilt seemed pitted against the Erie treasury, and the vultures flocked to Albany from every part of the State. Suddenly, at the very last moment, and even while special trains were bringing up fresh contestants to take part in the fray, a rumor ran through Albany as of some great public disaster, spreading panic and terror through hotel and corridor. The observer was reminded of the dark days of the war, when tidings came of some great defeat, as that on the Chickahominy or at Fredericksburg. In a moment the lobby was smitten with despair, and the cheeks of the legislators were blanched, for it was reported that Vanderbilt had withdrawn his opposition to the bill. The report was true. Either the Commodore had counted the cost and judged it excessive, or he despaired of the result. At any rate, he had yielded in advance. In a few moments the long struggle was over, and that bill which, in an unamended form, had but a few days before been thrown out of the Assembly by a vote of eighty-three to thirty-two, now passed it by a vote of one hundred and one to six, and was sent to the Governor for his signature. Then the wrath of the disappointed members

turned on Vanderbilt. Decency was forgotten in a frenzied sense of disappointed avarice. That same night the *pro rata* freight bill, and a bill compelling the sale of through tickets by competing lines, were hurriedly passed, simply because they were thought hurtful to Vanderbilt; and the docket was ransacked in search of other measures calculated to injure or annoy him. An adjournment, however, brought reflection, and subsequently, on this subject, the legislature stultified itself no more.

The bill had passed the legislature; would it receive the Executive signature? Here was the last stage of danger. For some time doubts were entertained on this point, and the last real conflict between the opposing interests took place in the Executive Chamber at Albany. There, on the afternoon of the 21st of April, Commodore Vanderbilt's counsel appeared before Governor Fenton, and urged upon him their reasons why the bill should be returned by him to the Senate without his signature. The arguments were patiently listened to, but, when they had closed, the Executive signature placed the seal of success upon Mr. Gould's labors at Albany. Even here the voice of calumny was not silent. As if this remarkable controversy was destined to leave a dark blot of suspicion upon every department of the civil service of New York, there were not wanting those who charged the Executive itself with the crowning act in this history of corruption. The very sum which had been paid, as it was pretended, was named; the broker of Executive action was pointed out, and the number of minutes was specified which should intervene between the payment of the bribe and the signing of the law.*

Practically, the conflict was now over, and the period of negotiation had already begun. The combat in the courts was indeed kept up until far into May, for the angry passions of the lawyers and of the judges required time in which to wear themselves out. Day after day the columns of the press revealed fresh scandals to the astonished public, which at last grew in-

* It is but justice to Governor Fenton to say that, though this charge was boldly advanced by respectable journals of his own party, it cannot be considered as sustained by the evidence. The testimony on the point will be found in the report of Senator Hale's investigating committee. Documents (Senate), 1869, No. 52, pp. 146–148, 151–155.

different to such revelations. Beneath all the wrangling of the courts, however, while the popular attention was distracted by the clatter of lawyers' tongues, the leaders in the controversy were quietly progressing towards a settlement. In the early days of his exile Mr. Drew had been more depressed in spirit, more vacillating in council, than his younger and more robust associates. The publicity and excitement which had sustained and even amused them had wearied and annoyed the old man. His mind had been oppressed with doubts and tormented by officious advisers. Stronger wills than his were bearing him along with them; and though, perhaps, not more scrupulous than those about him, he was certainly less bold. He missed also his home comforts; he felt himself a prisoner in everything but in name; he knew that he was distrusted, and his every action watched by associates of whom he even stood in physical fear. After the first week or two, and as affairs began to assume a less untoward aspect, his spirits revived, and he soon began to make secret advances towards his angry opponent. The hostilities of the Stock Exchange are proverbially short-lived. A broker skilled in the ways of his kind, in his evidence in one of these proceedings, assigned five minutes as the utmost period during which it was safe to count on the enmities or alliances of leading operators. Early in April Mr. Drew took advantage of that blessed immunity from arrest which the Sabbath confers on the hunted of the law, to revisit the familiar scenes across the river. His visits soon resulted in conferences between himself and Vanderbilt, and these conferences naturally led to overtures of peace. Though the tide was turning against the great railroad king, though an uncontrollable popular feeling was fast bearing down his schemes of monopoly, yet he was by no means beaten or subdued. His plans, however, had evidently failed for the present. It was now clearly his interest to abandon his late line of attack, and to bide his time patiently, or to possess himself of his prey by some other method. The wishes of all parties, therefore, were fixed on a settlement, and no one was disposed to stand out except in order to obtain better terms. The interests, however, were multifarious. There were four parties to be taken care of, and the depleted treasury of the Erie Railway was doomed to suffer.

The details of this masterpiece of Wall Street diplomacy have never come to light, but Mr. Drew's visits to New York became more frequent and less guarded, and, by the middle of April, he had appeared in Broad Street on a week-day, undisturbed by fears of arrest, and soon rumors began to spread of misunderstandings between himself and his brother exiles. It was said that his continual absences alarmed them, that they distrusted him, that his terms of settlement were not theirs. It was even asserted that his orders on the treasury were no longer honored, and that he had, in fact, ceased to be a power in Erie. Whatever truth there may have been in these rumors, it was very evident his associates had no inclination to trust themselves within the reach of the New York courts until a definitive treaty, satisfactory to themselves, was signed and sealed. This probably took place in the neighborhood of April 25th; for on that day the Erie camp at "Fort Taylor," as their uninviting hotel had been dubbed, was broken up, the President and one of the Executive Committee took steamer for Boston, and the other directors appeared before Judge Barnard, prepared to purge themselves of their contempt.

The details of the treaty which had been concluded between the high contracting parties were not divulged to the Board of Directors until the 2d of July. Upon that day Mr. Eldridge announced the following terms of settlement: Commodore Vanderbilt was to be relieved of fifty thousand shares of Erie stock at 70, receiving therefore $2,500,000 in cash, and $1,250,000 in bonds of the Boston, Hartford, and Erie at 80. He was also to receive a further sum of $1,000,000 outright, as a consideration for the privilege the Erie Road thus purchased of calling upon him for his remaining fifty thousand shares at 70 at any time within four months. He was also to have two seats in the Board of Directors, and all suits were to be dismissed and offences condoned. All the Vanderbilt proceedings had, however, been conducted in the names of other persons, who were by no means disposed to see themselves ignored in the final adjustment. The sum of $429,250 was fixed upon as a proper amount to assuage the sense of wrong from which these gentlemen suffered, and to efface from their memories all recollection of the unfortunate "pool" of the previous December. Why

the owners of the Erie Railway should have paid this indemnity of $4,000,000 is not very clear. The operations were apparently outside of the business of a railway company, and no more connected with the stockholders of the Erie than were the butchers' bills of the individual directors.

While Vanderbilt and his friends were thus provided for, Mr. Drew was to be left in undisturbed enjoyment of the fruits of his recent operations, but was to pay into the treasury $540,000 and interest, in full discharge of all claims and causes of action which the Erie Company might have against him. The Boston party, as represented by Mr. Eldridge, was to be relieved of $5,000,000 of their Boston, Hartford, and Erie bonds, for which they were to receive $4,000,000 of Erie acceptances. None of these parties, therefore, had anything to complain of, whatever might be the sensations of the real owners of the railway. A total amount of some $9,000,000 in cash was drawn from the treasury in fulfilment of this *settlement*, as the persons concerned were pleased to term this remarkable disposition of property intrusted to their care.

Messrs. Gould and Fisk still remained to be provided for, and to them their associates left — the Erie Railway. These gentlemen subsequently maintained that they had vehemently opposed this settlement, and had denounced it in the secret councils as a fraud and an outrage. This would seem in no way improbable. The rind of the orange is not generally considered the richest part of the fruit; a corporation on the verge of bankruptcy is less coveted, even by operators in Wall Street, than one rich in valuable assets. However, the voice of a clear majority was for peace. Mr. Eldridge counted out his bonds and received his acceptances, which latter were cashed at once to close up the transaction, and thereupon he resigned his positions as director and president. The Boston raiders then retired, heavy with spoil, into their own North country, where, doubtless, in good time, they will introduce the more highly developed civilization of the land of their temporary adoption. Mr. Vanderbilt apparently ceased to concern himself with Erie; and Daniel Drew, released from the anxieties of office, assumed for a space the novel character of a disinterested observer of the operations of Wall Street.

Thus, in the early days of July, Messrs. Fisk and Gould found themselves beginning life, as it were, in absolute control of the Erie Railway, but with an empty treasury and a doubtful reputation. Outwardly things did not look unpromising. The legal complications were settled, and the fearful load imposed by the settlements upon the already over-burdened resources of the road was not, of course, imparted to the public. It is unnecessary to add that the "outside" holders of the stock were, in the counsels of the managers, included in that public the inquiries of which in regard to the affairs of the company were looked upon by the ring in control as downright impertinence. A calm — a deceitful one indeed, but yet a calm — succeeded the severe agitations of the money market. All through the month of July money was easy and ruled at three or four per cent; Erie was consequently high, and was quoted at about 70, which enabled the company to dispose without loss of the Vanderbilt stock. It may well be believed that Messrs. Fisk and Gould could not have regarded their empty treasury, just depleted to the extent of nine millions, — trust funds misapplied by directors in the processes of stock-gambling, — without serious question as to their ability to save the road from bankruptcy. The October election was approaching, Vanderbilt was still a threatening element in the future, and new combinations might arise. Millions were necessary, and must at once be forthcoming. The new officials were, however, men of resources and were not men of many scruples. The money must be raised, and recent experience indicated a method of raising it. Their policy, freed from the influence of Drew's vacillating, treacherous, and withal timid nature, could now be bold and direct. The pretence of resistance to monopoly would always serve them, as it had served them before, as a plausible and popular cry. Above all, their councils were now free from interlopers and spies, for the first act of Messrs. Gould and Fisk had been to do away with the old board of auditors, and to concentrate all power in their own hands as president, treasurer, and controller. Fortunately for them it was midsummer, and the receipts of the road were very heavy, supplying them with large sums of ready money; most fortunately for them, also, a strange infatuation at this time took possession of the English mind.

Shrewd as the British capitalist proverbially is, his judgment in regard to American investments has been singularly fallible. When our national bonds went begging at a discount of sixty per cent, he transmitted them to Germany and refused to touch them himself. At the very same time a plausible type of the American railroad financier — a man the history of whose career would read like the tale of an Arabian night — was involving the whole Royal Exchange in wild and unlimited investments in a Western bubble road. To the British bankers who had apparently rushed from the extreme of caution to the extreme of confidence, even the crash of May, 1866, did not seem to teach wisdom. They now, after all the exposures of the preceding months, apparently because it seemed cheap, rushed into Erie, and the prices in New York were sustained by the steady demand for stock on foreign account. Not only did this curious infatuation, involving purchases to the extent of a hundred thousand shares, cover up the operations of the new ring, but, at a later period, the date of the possible return of this stock to Wall Street was the hinge on which the success of their culminating plot was made to turn.

The appearance of calm lasted but about thirty days. Early in August it was evident that something was going on. Erie fell suddenly ten per cent; in a few days more it experienced a further fall of seven per cent, touching 44 by the 19th of the month, upon which day, to the astonishment of Wall Street, the transfer books of the company were closed preparatory to the annual election. As this election was not to take place until the 13th of October, and as the books had thus been closed thirty days in advance of the usual time, it looked very much as though the managers were satisfied with the present disposition of the stock, and meant, by keeping it where it was, to preclude any such unpleasantness as an opposition ticket. The courts and a renewed war of injunctions were of course open to any contestants, including Commodore Vanderbilt, who desired to avail themselves of them; probably, however, the memory of recent struggles was too recent to induce any one to embark on those treacherous waters. At any rate nothing of the sort was attempted. The election took place at the usual time, and the ring in control voted themselves without

opposition into a new lease of power. Two new names had meanwhile appeared in the list of Erie directors, those of Peter B. Sweeney and William M. Tweed. The construction of the new board may be stated in a few words, and calls for no comment. It consisted of the Erie ring and the Tammany ring, brought together in close political and financial alliance; and, for the rest, a working majority of supple tools and a hopeless minority of respectable figure-heads. This formidable combination shot out its feelers far and wide; it wielded the influence of a great corporation with a capital of a hundred millions; it controlled the politics of the first city of the New World; it sent its representatives to the Senate of the State, and numbered among its agents the judges of the courts. Compact, disciplined, and reckless, it knew its own power and would not scruple to use it.

It was now the month of October, and the harvest had been gathered. The ring and its allies determined to reap their harvest also, and that harvest was to be nothing less than a contribution levied, not only upon Wall Street and New York, but upon all the immense interests, commercial and financial, which radiate from New York all over the country. Like the Cæsar of old, they issued their edict that all the world should be taxed. The process was not novel, but it was effective. A monetary stringency may be looked for in New York at certain seasons of every year. It is generally most severe in the autumn months, when the crops have to be moved, and the currency drains steadily away from the financial centre towards the extremities of the system. The method by which an artificial stringency is produced is thus explained in a recent report of the Comptroller of the Currency: "It is scarcely possible to avoid the inference that nearly one half of the available resources of the national banks in the city of New York are used in the operations of the stock and gold exchange; that they are loaned upon the security of stocks which are bought and sold largely on speculation, and which are manipulated by cliques and combinations, according as the bulls or bears are for the moment in the ascendancy. . . . . Taking advantage of an active demand for money to move the crops West and South, shrewd opera-

tors form their combination to depress the market by 'locking up' money, — withdrawing all they can control or borrow from the common fund; money becomes scarce, the rate of interest advances, and stocks decline. The legitimate demand for money continues; and, fearful of trenching on their reserve, the banks are strained for means. They dare not call in their demand loans, for that would compel their customers to sell securities on a falling market, which would make matters worse. Habitually lending their means to the utmost limit of prudence, and their credit much beyond that limit, to brokers and speculators, they are powerless to afford relief; — their customers by the force of circumstances become their masters. The banks cannot hold back or withdraw from the dilemma in which their mode of doing business has placed them. They must carry the load to save their margins. A panic which should greatly reduce the price of securities would occasion serious, if not fatal, results to the banks most extensively engaged in such operations, and would produce a feeling of insecurity which would be very dangerous to the entire banking interest of the country." *

All this machinery was now put in motion; the banks and their customers were forced into the false position described, and towards the end of October it had become perfectly notorious in Wall Street that large new issues of Erie had been made, and that these new issues were intimately connected with the sharp stringency then existing in the money market. It was at last determined to investigate the matter, and upon the 27th of the month a committee of three was appointed by the Stock Exchange to wait upon the officers of the corporation with the view of procuring such information as they might be willing to impart. The committee called on Mr. Gould and stated the object of their visit. In reply to their inquiries Mr. Gould informed them that Erie convertible bonds for ten millions of dollars had been issued, half of which had already been converted into stock, and the rest of which would be; that the money had been devoted to the purchase of Boston, Hartford, and Erie bonds for five millions, and also — of course — to payments for steel rails. The committee desired to know

* Finance Report, 1868, pp. 20, 21.

if any further issue of stock was in contemplation, but were obliged to rest satisfied with a calm assurance that no new issue was just then contemplated except "in certain contingencies"; from which enigmatical utterances Wall Street was left to infer that the exigencies of Messrs. Gould and Fisk were elements not to be omitted from any calculations as to the future of Erie and the money market. The amount of these issues of new stock was, of course, soon whispered in a general way; but it was not till months afterwards that a sworn statement of the secretary of the Erie Railway revealed the fact that the stock of the corporation had been increased from $34,265,300 on the 1st of July, 1868, the date when Drew and his associates had left it, to $57,766,300 on the 24th of October of the same year, or by two hundred and thirty-five thousand shares in four months. This, too, had been done without consultation with the board of directors and with no other authority than that conferred by the ambiguous resolution of February 19th. Under that resolution the stock of the company had now been increased one hundred and thirty-eight per cent in eight months. Such a process of inflation may, perhaps, justly be considered the most extraordinary feat of financial leger-demain which history has yet recorded.

Now, however, when the committee of the Stock Exchange had returned to those who sent them, the mask was thrown off, and operations were conducted with vigor and determination. New issues of Erie were continually forced upon the market until the stock fell to 35; greenbacks were locked up in the vaults of the banks, until the unexampled sum of twelve millions was withdrawn from circulation; the prices of securities and merchandise declined; trade and the autumnal movement of the crops were brought almost to a stand-still; and loans became more and more difficult to negotiate, until at length even one and a half per cent a day was paid for carrying stocks. Behind all this it was notorious that some one was pulling the wires, the slightest touch upon which sent a quiver through every nerve of the great financial organism, and wrung private gain from public agony. The strange proceeding reminds one of those scenes in the chambers of the Inquisition where the judges calmly put their victim to the question, until his

spasms warned them not to exceed the limits of human endurance. At last the public distress reached the ears of the Government at Washington. While it was simply the gamblers of Wall Street who were tearing each other, their clamor for relief excited little sympathy. When, however, the suffering had extended through all the legitimate business circles of the country, — when the scarcity of money threatened to cut off the winter food of the poor, to rob the farmer of the fruits of his toil, and to bring ruin upon half of the debtor class of the community, — then even Mr. McCulloch, pledged as he was to contraction, was moved to interfere. The very revenues of the government were affected by the operations of gamblers. They were therefore informed that, if necessary, fifty millions of additional currency would be forthcoming to the relief of the community, and then, and not till then, were the screws loosened.

The harvest of the speculators, however, was still but half gathered. Hitherto the combination had operated for a fall. Now was the moment to change their tactics and take advantage of the rise. The time was calculated to a nicety. The London infatuation had continued wonderfully, and as fast as certificates of stock were issued they seemed to take wings across the Atlantic. Yet there was a limit even to English credulity, and in November it became evident that the agents of foreign houses were selling their stock to arrive. The price was about 40 ; the certificates might be expected by the steamer of the 23d. Instantly the combination changed front. As before they had depressed the market, they now ran it up, and, almost as if by magic, the stock, which had been heavy at 40, astonished every one by shooting up to 50. New developments were evidently at hand.

At this point Mr. Daniel Drew once more made his appearance on the stage. As was very natural, he had soon wearied of the sameness of his part as a mere looker on in Wall Street, and had relapsed into his old habits. He was no longer treasurer of the Erie, and could not therefore invite the public to game, while he himself with sombre piety shook the loaded dice. But it had become with him a second nature to operate in Erie, and once more he was deep in its movements. At first

he had combined with his old friends, the present directors, in their "locking-up" conspiracy. He had agreed to assist them to the extent of four millions. The vacillating, timid nature of the man, however, could not keep pace with his more daring and determined associates, and, after embarking a million, becoming alarmed at the success of the joint operations and the remonstrances of those who were threatened with ruin, he withdrew his funds from the operators' control and himself from their councils. But though he did not care to run the risk or to incur the odium, he had no sort of objection to sharing the spoils. Knowing, therefore, or supposing that he knew, the plan of campaign, and that plan jumping with his own bearish inclinations, he continued, on his own account, operations looking to a fall. One may easily conceive the wrath of the Erie operators at such a treacherous policy; and it is not difficult to imagine their vows of vengeance. Meanwhile all went well with Daniel Drew. Erie looked worse and worse, and the golden harvest seemed drawing near. By the middle of November he had contracted for the delivery of some seventy thousand shares at current prices, averaging, perhaps, 38, and probably was counting his gains. He did not appreciate the full power and resources of his old associates. On the 14th of November their tactics changed, and he found himself involved in terrible entanglements, — cornered, hopelessly cornered. His position disclosed itself on Saturday. Naturally the first impulse was to have recourse to the courts. An injunction — a dozen injunctions — could be had for the asking, but, unfortunately, could be had by both parties. Drew's own recent experience, and his intimate acquaintance with the characters of Fisk and Gould, were not calculated to inspire him with much confidence in the efficacy of the law. But nothing else remained, and, after hurried consultations among the victims, the lawyers were applied to, the affidavits were prepared, and it was decided to repair on the following Monday to the so-called courts of justice.

Nature, however, had not bestowed on Daniel Drew the steady nerve and sturdy gambler's pride of either Vanderbilt or his old companions at Jersey City. His mind wavered and hesitated between different courses of action. His only

care was for himself, his only thought was of his own position. He was willing to betray one party or the other, as the case might be. He had given his affidavit to those who were to bring the suit on the Monday, but he stood perfectly ready to employ Sunday in betraying their counsels to the defendants in the suit. A position more contemptible, a state of mind more pitiable, can hardly be conceived. After passing the night in this abject condition, on the morning of Sunday he sought out Mr. Fisk for purposes of self-humiliation and treachery. He then partially revealed the difficulties of his situation, only to have his confidant prove to him how entirely he was caught by completing to him the revelation. He betrayed the secrets of his new allies, and bemoaned his own hard fate; he was thereupon comforted by Mr. Fisk with the cheery remark that "he (Drew) was the last man who ought to whine over any position in which he placed himself in regard to Erie." The poor man begged to see Mr. Gould, and would take no denial. Finally Mr. Gould was brought in, and the scene was repeated for his edification. The two must have been satiated with revenge. At last they sent him away, promising to see him again that evening. At the hour named he again appeared, and, after waiting their convenience, — for they spared him no humiliation, — he again appealed to them, offering them great sums if they would issue new stock or lend him of their stock. He implored, he argued, he threatened. At the end of two hours of humiliation, persuaded that it was all in vain, that he was wholly in the power of antagonists without mercy, he took his hat, said "I will bid you good night," and went his way.

There is a touch of nature about this scene which seems like fiction. Indeed it irresistibly recalls the feebler effort of Dickens to portray Fagin's last night alive, and there is more pathos in the parting address than in the Jew's, — "An old man, my lord! a very, very old man." But the truth is stranger than fiction. Dickens did not dare to picture the old "fence" in Oliver Twist turned out of his own house and stripped of his plunder by the very hands through which he had procured it. In the case of Daniel Drew, however, the ideal poetic justice was brought about in fact; the evil instructions returned to plague

the inventor, and it is hard to believe that, as he left the Erie offices that night, his apt pupils, even as those of Fagin might have done, did not watch his retiring steps with suppressed merriment; and, when the door had closed upon him, that the one did not explode in loud bursts of laughter, while the other, with a quiet chuckle, plunged his hands into those capacious pockets which yawned for all the wealth of Erie. Bad as all these things are, terrible as is the condition of affairs only partially revealed, there is a grim humor running through them which ever makes itself felt.

But to return to the course of events. With the lords of Erie, forewarned was forearmed. They knew something of the method of procedure in New York courts of law. At this particular juncture Mr. Justice Sutherland, a magistrate of such pure character and unsullied reputation that it is inexplicable how he ever came to be elevated to the bench on which he sits, was holding chambers, according to assignment, for the four weeks between the first Monday in November and the first Monday in December. By a rule of the court, all applications for orders during that time were to be made before him, and he only, according to the courtesy of the Bench, took cognizance of such proceedings. Some general arrangement of this nature is manifestly necessary to avoid continual conflicts of jurisdiction. The details of the assault on the Erie directors having been settled, counsel appeared before Judge Sutherland on Monday morning, and petitioned for an injunction restraining the Erie directors from any new issue of stock or the removal of the funds of the company beyond the jurisdiction of the court, and also asking that the road be placed in the hands of a receiver. The suit was brought in the name of Mr. Auguste Belmont, who was supposed to represent large foreign holders. The petition set forth at length the alleged facts in the case, and was supported by the affidavits of Mr. Drew and others. Mr. Drew apparently did not inform the counsel of the manner in which he had passed his leisure hours on the previous day; had he done so, Mr. Belmont's counsel probably would have expedited their movements. The injunction was, however, duly signed, and, doubtless, immediately served.

Meanwhile Messrs. Gould and Fisk had not been idle. Ap-

plications for injunctions and receiverships were a game that two could play at, and long experience had taught these close observers the very great value of the initiative in law. Accordingly, some two hours before the Belmont application was made they had sought out no less a person than Mr. Justice Barnard, caught him, as it were, either in his bed or at his breakfast, whereupon he had held a *lit de justice*, and made divers astonishing orders. A petition was presented in the name of one McIntosh, a salaried officer of the Erie Road, who claimed also to be a shareholder. It set forth the danger of injunctions and of the appointment of a receiver, the great injury likely to result therefrom, etc. After due consideration on the part of Judge Barnard, an injunction was issued, staying and restraining all suits, and actually appointing Jay Gould receiver, to hold and disburse the funds of the company in accordance with the resolutions of the Board of Directors and the Executive Committee. This, certainly, was a very brilliant flank movement, and testified not less emphatically to Gould's genius than to Barnard's law, and to the efficacy of the new combination between Tammany Hall and the Erie Railway. Since the passage of the bill "to legalize counterfeit money," in April and the present November, new light had burst upon the judicial mind, and as the news of one injunction and a vague rumor of the other crept through Wall Street that day, it was no wonder that operators stood aghast and that Erie fluctuated wildly from 50 to 61 and back to 48.

The Erie directors, however, did not rest satisfied with the position which they had won through Judge Barnard's order. That simply placed them, as it were, in a strong defensive attitude. They were not the men to stop there: they aspired to nothing less than a vigorous offensive. With a superb audacity, which excites admiration, the new trustee immediately filed a supplementary petition. Therein it was duly set forth that doubts had been raised as to the legality of the recent issue of some two hundred thousand shares of stock, and that only about this amount was to be had in America; the trustee therefore petitioned for authority to use the funds of the corporation to purchase and cancel the whole of this amount at any price less than the par value, without regard to

the rate at which it had been issued. The desired authority was conferred by Mr. Justice Barnard as soon as asked. Human assurance could go no further. The petitioners had issued these shares in the bear interest at 40, and had run down the value of Erie to 35; they had then turned round, and were now empowered to buy back that very stock in the bull interest, and in the name of the corporation, at par. A law of the State distinctly forbade corporations from operating in their own stock; but this law was disregarded, as if it had been only an injunction. An injunction forbade the treasurer from making any disposition of the funds of the company, and this injunction was respected no more than the law. These trustees had sold the property of their wards at 40; they were now prepared to use the money of their wards to buy the same property back at 80, and a judge had been found ready to confer on them the power to do so. Drew could not withstand such tactics, and indeed the annals of Wall Street furnished no precedent or parallel. They might have furnished one, but the opportunity had been lost. Had Robert Schuyler not lived fifteen years too soon, — had he, instead of flying his country and dying broken-hearted in exile, boldly attempted a change of front when his fraudulent issues had filled Wall Street with panic, and had he sought to use the funds of his company for a masterly upward movement in his own manufactured stock, — then, though in those uncultivated and illiberal days he might have failed, and even have passed from the presence of an indignant jury into the keeping of a surly jailer, at least he would have evinced a mind in advance of his day, and could have comforted himself with the assurance that he was the first of a line of great men, and that the time was not far distant when his name and his fame would be cherished among the most brilliant recollections of Wall Street.

When this last, undreamed-of act was made public on Wednesday at noon, it was apparent that the crisis was not far off. Daniel Drew was cornered. Erie was scarce and selling at 47, and would not become plenty until the arrival of the English steamer on Monday; and so, at 47, Mr. Drew flung himself into the breach to save his endangered credit, and, under his purchases, the stock rapidly rose, until at five o'clock on

Wednesday afternoon it reached 57. Contrary to expectation, the "corner" had not yet culminated. It became evident the next morning that before two o'clock that day the issue would be decided. Drew fought desperately. The Brokers' Board was wild with excitement. High words passed; collisions took place; the bears were savage, and the bulls pitiless. Erie touched 62, and there was a difference of sixteen per cent between cash stock and stock sold to be delivered in three days, — when the steamer would be in, — and a difference of ten per cent between stock to be delivered on the spot and that to be delivered at the usual time, which was a quarter after two o'clock. Millions were handled like thousands; fabulous rates of interest were paid; rumors of legal proceedings were flying about, and forays of the Erie chiefs on the Vanderbilt roads were confidently predicted. New York Central suddenly shot up under these influences seven per cent, and Vanderbilt seemed about to enter the field. The interest of the stock market centred in the combatants and on these two great corporations. All other stocks were quiet and neglected, while the giants were fighting it out. The battle was too fierce to last long. At a quarter before three o'clock the struggle would be over. Yet now, at the very last moment, the prize which trembled before them eluded the grasp of the Erie ring. Their opponent was not saved, but they shared his disaster. Their combination had turned on the fact, disclosed to them by the Erie books, that some three hundred thousand shares of its stock had been issued in the ten-share certificates which alone are transmitted to London. This amount they supposed to be out of the country; the balance they could account for as beyond the reach of Drew. Suddenly, as two o'clock approached, and Erie was trembling in the sixties, all Broadway — every tailor and bootmaker and cigar vendor of New York — seemed pouring into Broad Street, and each new-comer held eagerly before him one or more of those ten-share certificates which should have been in London. Not only this, but the pockets of the agents of foreign bankers seemed bursting with them. Bedlam had suddenly broken loose in Wall Street. It was absolutely necessary for the conspirators to absorb this stock, to keep it from the hands of Drew. This they attempted to do, and manfully stood

their ground, fighting against time. Suddenly, when the hour had almost come, — when five minutes more would have landed them in safety, — through one of those strange incidents which occur in Wall Street, and which cannot be explained, they seemed smitten with panic. It is said their bank refused to certify their checks for the sudden increased amount; the sellers insisted on having certified checks, and, in the delay caused by this unforeseen difficulty, the precious five minutes elapsed, and the crisis had passed. The fruits of their plot had escaped them. Drew made good his contracts at 57, the stock at once fell heavily to 42, and a dull quiet succeeded to the excitement of the morning.

The Wall Street conflict was over, and some one had reaped a harvest. Who was it? It was not Drew, for his losses, apart from a ruined prestige, were estimated at nearly a million and a half of dollars. The Erie directors were not the fortunate men, for their only trophies were great piles of certificates of Erie stock, which had cost them "corner" prices, and for which no demand existed. If Drew's loss was a million and a half, their loss was likely to be nearer to three millions. Who, then, were the recipients of these missing millions? There is an ancient saying, which seems to have been tolerably verified in this case, that when certain persons fall out certain other persons come by their dues. The "corner" was very beautiful in all its details, and most admirably planned; but, unfortunately, those who engineered it had just previously made the volume of stock too large for accurate calculation. For once the outside public had been at hand and Wall Street had been found wanting. A large portion of the vast sum taken from the combatants found its way into the pockets of the agents of English bankers, and a part of it was accounted for by them to their principals; another portion went to relieve anxious holders among the American outside public; the remainder fell to professional operators, probably far more lucky than sagacious. Still, there had been a fall, before there was a rise. The subsequent disaster, perhaps, no more than counterbalanced the earlier victory; at any rate, Messrs. Gould and Fisk did not succumb, but preserved a steady front, and Erie was more upon the street than ever. In fact,

it was wholly there now. The recent operations had proved too outrageous even for the Brokers' Board. A new rule was passed, that no stock should be called the issues of which were not registered at some respectable banking-house. The Erie directors declined to conform to this rule, and their road was stricken from the list of calls. Nothing daunted by this, these Protean creatures at once organized a new board of their own, and were sufficiently successful in their efforts to have Erie quoted and bought and sold as regularly as ever.

Though the catastrophe had taken place on the 19th, the struggle was not yet over. The interests involved were so enormous, the developments were so astounding, such passions had been aroused, that some safety-valve through which suppressed wrath could work itself off was absolutely necessary, and this the courts of law afforded. The attack was stimulated by various motives. The *bona fide* holders of the stock, especially the foreign holders, were alarmed for the existence of their property. The Erie ring had now boldly taken the position that their duty was, not to manage the road in the interests of its owners, not to make it a dividend-paying corporation, but to preserve it from consolidation with the Vanderbilt monopoly. This policy was openly proclaimed by Mr. Gould, at a later day, before an investigating committee at Albany. With unspeakable effrontery, — an effrontery so great as actually to impose on his audience and a portion of the press, and make them believe that the public ought to wish him success, — he described how stock issues at the proper time to any required amount could alone keep him in control of the road, and keep Mr. Vanderbilt out of it; it would be his duty therefore, he argued, to issue as much new stock, at about the time of the annual election, as would suffice to keep a majority of all the stock in existence under his control; and he declared that he meant to do this. The strangest thing of all was, that it never seemed to occur to his audience that the propounder of this comical sophistry was a trustee and guardian for the stockholders, and not a public benefactor; and that the owners of the Erie Road might possibly prefer not to be deprived of their property, in order to secure the blessing of competition. So unique

a method of securing a re-election was probably never before suggested with a grave face, and yet, if we may believe the reporters, Mr. Gould, in developing it, produced a very favorable impression on the committee. It was hardly to be expected that such advanced views as to the duties and powers of railway directors would impress favorably commonplace individuals who might not care to have their property scaled down to meet Mr. Gould's views of public welfare. These persons accordingly, popularly supposed to be represented by Mr. Belmont, wished to get their property out of the hands of such fanatics in the cause of cheap transportation and plentiful stock, with the least possible delay. Combined with these were the operators who had suffered in the late "corner," and who desired to fight for better terms and a more equal division of plunder. Behind them all, Vanderbilt was supposed to be keeping an eager eye on the long-coveted Erie. Thus the materials for litigation existed in abundance.

On Monday, the 23d, Judge Sutherland vacated Judge Barnard's order appointing Jay Gould receiver, and, after seven hours' argument and some exhibitions by counsel of vulgarity and indecency, which vied with those of the previous April, he appointed Mr. Davies, an ex-chief justice of the Court of Appeals, receiver of the road and its franchise, leaving the special terms of the order to be settled at a future day. The seven hours' struggle had not been without an object, for, before the order was entered at nine o'clock in the evening, Judge Barnard — who had employed his time since the 16th in delivering to the grand jury one of the most extraordinary charges ever listened to, in which he had informed them that he was "dependent on the charity of his wife" to eke out a precarious support, and edified them in regard to a "combination of thieves, scoundrels, and rascals who had infested Wall Street and Broad Street for years, and were now quarrelling among themselves" * — had already issued a stay of the proceedings then pending before his associate. Tuesday had been named by Judge Sutherland, at the time he appointed his receiver, as

* The whole of this curiosity of legal literature, which, with its subsequent history, should by no means be lost to posterity, can be found in the New York Times of November 24, and the Evening Post of December 1, 1868.

the day upon which he would settle the details of the order. His first proceeding upon that day, on finding his action stayed by Judge Barnard, was to grant a motion to show cause, on the next day, why Barnard's order should not be vacated. This style of warfare, however, savored altogether too much of the tame defensive to meet successfully the bold strategy of Messrs. Gould and Fisk. They carried the war into Africa. In the twenty-four hours during which Judge Sutherland's order to show cause was pending three new actions were commenced by them. In the first place, they sued the suers. Alleging the immense injury likely to result to the Erie Road from actions commenced, as they alleged, solely with a view of extorting money in settlement, Mr. Belmont was sued for a million of dollars in damages. Their second suit was against Messrs. Work, Schell, and others, concerned in the litigations of the previous spring, to recover the $429,250 then paid them, as was alleged, in a fraudulent settlement. These actions were, however, commonplace, and might have been brought by ordinary men. Messrs. Gould and Fisk were always displaying the invention of genius. The same day they carried their quarrels into the United States courts. The whole press, both of New York and of the country, disgusted with the parody of justice enacted in the State courts, had cried aloud to have the whole matter transferred to the United States tribunals, the decisions of which might have some weight, and where, at least, no partisans upon the bench would shower each other with stays, injunctions, vacatings of orders, and other such pellets of the law. The Erie ring, as usual, took time by the forelock. While their slower antagonists were deliberating, they acted. On this Monday, the 23d, one Henry B. Whelpley, who had been a clerk of Gould's, and who claimed to be a stockholder in the Erie and a citizen of New Jersey, instituted a suit against the Erie Railway before Judge Blatchford of the United States District Court. Alleging the doubts which hung over the validity of the recently issued stock, he petitioned that a receiver might be appointed, and the company directed to transfer into his hands enough property to secure from loss himself, as well as all other holders of the new issues. The Erie counsel were on the ground, and, as soon

as the petition was read, waived all further notice as to the matters contained in it; whereupon the court at once appointed Jay Gould receiver, and directed the Erie Company to place eight millions of dollars in his hands to protect the rights represented by the plaintiff. Of course the receiver was required to give bonds with sufficient sureties. Among the sureties was James Fisk, Jr. The brilliancy of this move was only surpassed by its success. It fell like a bombshell in the enemy's camp, and scattered dismay among those who still preserved a lingering faith in the virtue of law as administered by any known courts. On what ground so highly respectable a magistrate as Judge Blatchford based this extraordinary order is not known. His action was asked for on the ground of fraud. If any fraud had been committed, the officers of the company alone could be the delinquents. To guard against the consequences of that fraud a receiver was asked for, and the court appointed as receiver the very officer in whom the alleged frauds on which its action was based must have originated. The Erie ring, at least, had no occasion to be dissatisfied with this day's proceedings.

The next day Judge Sutherland made short work of his brother Barnard's stay of proceedings in regard to the Davies receivership. He vacated it at once, and incontinently pro ceeded, wholly ignoring the action of Judge Blatchford on the day before, to settle the terms of the order, which, covering as it did the whole of the Erie property and franchise, excepting only the operating of the road, bade fair to lead to a conflict of jurisdiction between the State and Federal courts.

And now a new judicial combatant appears in the arena. It is difficult to say why Judge Barnard, at this time, disappears from the narrative. Perhaps the notorious judicial violence of the man, which must have made his eagerness as dangerous to the cause he espoused as the eagerness of a too swift witness, had alarmed the Erie counsel. Perhaps the fact that Judge Sutherland's term in chambers would expire in a few days had made them wish to intrust their cause to the magistrate who was to succeed him. At any rate, the new order staying proceedings under Judge Sutherland's order was obtained from Judge Cardozo, — it is said, somewhat before the

terms of the receivership had been finally settled. The change spoke well for the discrimination of those who made it, for Judge Cardozo is a very different man from Judge Barnard. Courteous but inflexible, subtle, clear-headed, and unscrupulous, this magistrate conceals the iron hand beneath the silken glove. Equally versed in the laws of New York and in the mysteries of Tammany, he had earned his place by a partisan decision on the excise law, and was nominated for the bench by Mr. Fernando Wood, in a few remarks concluding as follows: "Judges were often called on to decide on political questions, and he was sorry to say the majority of them decided according to their political bias. It was therefore absolutely necessary to look to their candidate's political principles. He would nominate, as a fit man for the office of Judge of the Supreme Court, Albert Cardozo." Nominated as a partisan, a partisan Cardozo has always been, when the occasion demanded. Such was the new and far more formidable champion who now confronted Sutherland, in place of the vulgar Barnard. His first order in the matter — to show cause why the order of his brother judge should not be set aside — was not returnable until the 30th, and in the intervening five days many events were to happen.

Immediately after the settlement by Judge Sutherland of the order appointing Judge Davies receiver, that gentleman had proceeded to take possession of his trust. Upon arriving at the Erie building, he found it converted into a fortress, with a sentry patrolling behind the bolts and bars, to whom was confided the duty of scrutinizing all comers, and of admitting none but the faithful allies of the garrison. It so happened that Mr. Davies, himself unknown to the custodian, was accompanied by Mr. Eaton, the former attorney of the Erie corporation. This gentleman was recognized by the sentry, and forthwith the gates flew open for himself and his companion. In a few moments more the new receiver astonished Messrs. Gould and Fisk, and certain legal gentlemen with whom they happened to be in conference, by suddenly appearing in the midst of them. The apparition was not agreeable. However, Mr. Fisk, with a fair appearance of cordiality, welcomed the strangers, and shortly after left the room. Speedily returning, his manner underwent

a change, and he requested the new-comers to go the way they came. As they did not comply at once, he opened the door, and directed their attention to some dozen men of forbidding aspect who stood outside, and who, he intimated, were prepared to eject them forcibly if they sought to prolong their unwelcome stay. As an indication of the lengths to which Mr. Fisk was prepared to go, this was sufficiently significant. The movement, however, was a little too rapid for his companions; the lawyers protested, Mr. Gould apologized, Mr. Fisk cooled down, and his familiars retired. The receiver then proceeded to give written notice of his appointment, and the fact that he had taken possession; disregarding, in so doing, an order of Judge Cardozo, staying proceedings under Judge Sutherland's order, which one of the opposing counsel drew from his pocket, but which Mr. Davies not inaptly characterized as a "very singular order," seeing that it was signed before the terms of the order it sought to affect were finally settled. At length, however, at the earnest request of some of the subordinate officials, and satisfied with the formal possession he had taken, the new receiver delayed further action until Friday. He little knew the resources of his opponents, if he vainly supposed that a formal possession signified anything. The succeeding Friday found the directors again fortified within, and himself a much enjoined wanderer without. The vigilant guards were now no longer to be beguiled. Within the building, constant discussions and consultations were taking place; without, relays of detectives incessantly watched the premises. No rumor was too wild for public credence. It was confidently stated that the directors were about to fly the State and the country, — that the treasury had already been conveyed to Canada. At last, late on Sunday night, Mr. Fisk with certain of his associates left the building, and made for the Jersey ferry; but on the way he was stopped by a vigilant lawyer, and many papers were served upon him. His plans were then changed. He returned to the office of the company, and presently the detectives saw a carriage leave the Erie portals, and heard a loud voice order it to be driven to the Fifth Avenue Hotel. Instead of going there, however, it drove to the ferry, and presently an engine, with an empty directors' car attached, dashed out of the

Erie station in Jersey City, and disappeared in the darkness. The detectives met and consulted; the carriage and the empty car were put together, and the inference, announced in every New York paper the succeeding day, was that Messrs. Fisk and Gould had absconded with millions of money to Canada.

That such a ridiculous story should have been published, much less believed, simply shows how utterly demoralized the public mind had become, and how prepared for any act of high-handed fraud or outrage. The libel did not long remain uncontradicted. The next day a card from Mr. Fisk was telegraphed to the newspapers, denying the calumny in indignant terms. The eternal steel rails were again made to do duty, and the midnight flitting became a harmless visit to Binghamton on business connected with a rolling-mill. Judge Balcom, however, of injunction memory in the earlier records of the Erie suits, resided at Binghamton, and a leading New York paper not inaptly made the timid inquiry of Mr. Fisk, "If he really thought that Judge Balcom was running a rolling-mill of the Erie Company, what did he think of Judge Barnard?" However, Mr. Fisk, as became him in his character of the Maecenas of the bar, instituted suits claiming damages in fabulous sums, for defamation of character, against some half-dozen of the leading papers, and nothing further was heard of the matter, nor indeed of the suits either. Not so of the trip to Binghamton. On Tuesday, the 1st of December, while one set of lawyers were arguing an appeal in the Whelpley case before Judge Nelson in the Federal courts, and another set were procuring orders from Judge Cardozo staying proceedings authorized by Judge Sutherland, a third set were aiding Judge Balcom in certain new proceedings instituted in the name of the Attorney-General against the Erie Road. The result arrived at was, of course, that Judge Balcom declared his to be the only shop where a regular, reliable article in the way of law was retailed, and then proceeded forthwith to restrain and shut up the opposition establishments. The action was brought to terminate the existence of the defendant as a corporation, and, by way of preliminary, application was made for an injunction and the appointment of a receiver. His honor held that, as only three receivers had as yet been appointed,

he was certainly entitled to appoint another. It was perfectly clear to him that it was his duty to enjoin the defendant corporation from delivering the possession of its road, or of any of its assets, to either of the receivers already appointed; it was equally clear that the corporation would be obliged to deliver them to any receiver he might appoint. However, he was not prepared to name a receiver just then, though he intimated that he should not hesitate to do so if necessary. So he contented himself with the appointment of a referee to look into matters, and, generally, enjoined the directors from omitting to operate the road themselves, or from delivering the possession of it to "any person claiming to be a receiver."

This raiding upon the agricultural judges was not peculiar to the Erie party. On the contrary, in this proceeding they rather followed than set an example; for, a day or two previous to Mr. Fisk's hurried journey, Judge Peckham of Albany had, upon papers identical with those in the Belmont suit, issued divers orders, similar to those of Judge Balcom, but on the other side, tying up the Erie directors in a most astonishing manner, and clearly hinting at the expediency of an additional receiver to be appointed at Albany. The amazing part of these Peckham and Balcom proceedings is that they seem to have been initiated with perfect gravity, and neither to have been looked upon as jests nor intended by their originators to bring the courts and the laws of New York into ridicule and contempt. Of course the several orders in these cases were of no more importance than so much waste paper, unless, indeed, some very cautious counsel may have considered an extra injunction or two very convenient things to have in his house; and yet, curiously enough from a legal point of view, those in Judge Balcom's court seem to have been about the only properly and regularly initiated proceedings in the whole case.

These little rural episodes in no way interfered with a renewal of vigorous hostilities in New York. While Judge Balcom was appointing his referee, Judge Cardozo granted an order for a reargument in the Belmont suit,— which brought up again the appointment of Judge Davies as receiver,— and assigned the hearing for the 6th of December. This step on his part reminds one of certain performances in the no-

torious case of the Wood leases, and made the plan of operations perfectly clear. The period during which Judge Sutherland was to sit in chambers was to expire on the 4th of December, and Cardozo himself was to succeed him; he now, therefore, proposed to signalize his associate's departure from chambers by reviewing his orders. No sooner had he granted the motion, than the opposing counsel applied to Judge Sutherland, who forthwith issued an order to show cause why the reargument ordered by Judge Cardozo should not take place before him at once. Upon which the counsel of the Erie Road instantly ran over to Judge Cardozo, who vacated Judge Sutherland's order out of hand. The lawyers then left him and ran back to Judge Sutherland with a motion to vacate this last order. The contest was now becoming altogether too ludicrous. Somebody must yield, and, when it was reduced to that, the honest Sutherland was pretty sure to give way to the subtle Cardozo. Accordingly the hearing on this last motion was postponed until the next morning, when Judge Sutherland made a not undignified statement as to his position, and closed by remitting the whole subject to the succeeding Monday, at which time Judge Cardozo was to succeed him in chambers. Cardozo, therefore, was now in undisputed possession of the field. In his closing explanation Judge Sutherland did not quote, as he might have done, the following excellent passage from the opinion of the court of which both he and Cardozo were justices, delivered in the Schell case as recently as the last day of the previous June: "The idea that a cause by such manœuvres as have been resorted to here can be withdrawn from one judge of this court and taken possession of by another; that thus one judge of the same and no other powers can practically prevent his associate from exercising his judicial functions; that thus a case may be taken from judge to judge whenever one of the parties fears that an unfavorable decision is about to be rendered by the judge who, up to that time, had sat in the case, and that thus a decision in the suit may be constantly and indefinitely postponed at the will of one of the litigants only, deserves to be noticed as being a curiosity in legal tactics, — a remarkable exhibition of inventive genius and fertility of expedient to embarrass suits which

this extraordinarily conducted litigation has developed. Such a practice as that disclosed by this litigation, sanctioning the attempt to counteract the orders of each other in the progress of the suit, I confess is new and shocking to me, ... and I trust that we have seen the last in this high tribunal of such practices as this case has exhibited. No apprehension, real or fancied, that any judge is about, either wilfully or innocently, to do a wrong can palliate, much less justify it." Neither did Judge Sutherland state, as he might have stated, that this admirable expression of the sentiments of the full bench was written and delivered by Judge Albert Cardozo. However, it was now very clear that Receiver Davies might abandon all hope of operating the Erie Railway, and that Messrs. Gould and Fisk were borne upon the swelling tide of victory.

The prosperous aspect of their affairs now encouraged these last-named gentlemen to yet more vigorous offensive operations. The next attack was upon Vanderbilt in person. On Saturday, the 5th of December, only two days after Judge Sutherland and Receiver Davies were disposed of, the indefatigable Fisk waited on Commodore Vanderbilt, and, in the name of the Erie Company, tendered him fifty thousand shares of Erie common stock at 70. As the stock was then selling in Wall Street at 40, the Commodore naturally declined to avail himself of this liberal offer. He even went further, and, disregarding his usual wise policy of silence, wrote to the New York Times a short communication, in which he referred to the alleged terms of settlement of the previous July, so far as they concerned himself, and denied them in the following explicit language: "I have had no dealings with the Erie Railway Company, nor have I ever sold that company any stock or received from them any *bonus*. As to the suits instituted by Mr. Schell and others, I had nothing to do with them, nor was I in any way concerned in their settlement." This was certainly an announcement calculated to confuse the public; but the confusion became confounded, when, upon the 10th, Mr. Fisk followed him in a card in which he reiterated the alleged terms of settlement, and reproduced two checks of the Erie Company, of July 11, 1868, made payable to the treasurer and by him indorsed to C. Van-

derbilt, upon whose order they had been paid. These two checks were for the sum of a million of dollars. He further said that the company had a paper in Mr. Vanderbilt's own handwriting, stating that he had placed fifty thousand shares of Erie stock in the hands of certain persons, to be delivered on payment of $3,500,000, which sum he declared had been paid. Undoubtedly these apparent discrepancies of statement admitted of an explanation; and some thin veil of equivocation, such as the transaction of the business through third parties, justified Vanderbilt's statements to his own conscience. Comment, however, is wholly superfluous, except to call attention to the amount of weight which is to be given to the statements and denials, apparently the most general and explicit, which from time to time were made by the parties to these proceedings. This short controversy merely added a little more discredit to what was already not deficient in that respect. On the 10th of December the Erie Company sued Commodore Vanderbilt for $3,500,000, specially alleging in their complaint the particulars of that settlement all knowledge of or connection with which the defendant had so emphatically denied.

None of the multifarious suits which had been brought as yet were aimed at Mr. Drew. The quondam treasurer had apparently wholly disappeared from the scene on the 19th of November. Mr. Fisk took advantage, however, of a leisure day to remedy this oversight, and a suit was commenced against Drew, on the ground of certain transactions between him, as treasurer, and the railway company, in relation to some steamboats concerned in the trade of Lake Erie. The usual allegations of fraud, breach of trust, and other trifling and, technically, not State prison offences, were made, and damages were set at a million of dollars.

Upon the 8th, the argument in Belmont's case had been reopened before Judge Cardozo in New York, and upon the same day, in Oneida County, Judge Boardman, another justice of the Supreme Court, had proceeded to contribute his share to the existing complications. Counsel in behalf of Receiver Davies had appeared before him, and, upon their application, the Cardozo injunction, which restrained the receiver from taking

possession of the Erie Railway, had been dissolved. Why this application was made, or why it was granted, surpasses comprehension. However, the next day, Judge Boardman's order having been read in court before Judge Cardozo, that magistrate suddenly revived to a full appreciation of the views expressed by him in June in regard to judicial interference with judicial action, and at once stigmatized Judge Boardman's action as "extremely indecorous." Neglecting, however, the happy opportunity to express an opinion as to his own conduct during the previous week, he simply stayed all proceedings under this new order, and applied himself to the task of hearing the case before him reargued.

This hearing lasted many days, was insufferably long, and inexpressibly dull. While it was going on, upon the 15th, Judge Nelson, in the United States court, delivered his opinion in the Whelpley suit, reversing, on certain technical grounds, the action of Judge Blatchford, and declaring that no case for the appointment of a receiver had been made out; accordingly he set aside that of Gould, and, in conclusion, sent the matter back to the State court, or, in other words, to Judge Cardozo, for decision. Thus the gentlemen of the ring, having been most fortunate in getting their case into the Federal court before Judge Blatchford, were now even more fortunate in getting it out of that court when it had come before Judge Nelson. After this, room for doubt no longer existed. Brilliant success at every point had crowned the strategy of the Erie directors. For once Vanderbilt was effectually routed and driven from the field. That he shrunk from continuing the contest against such opponents is much to his credit. It showed that he, at least, was not prepared to see how near he could come to the doors of a State prison and yet not enter them; that he did not care to take in advance the opinion of leading counsel as to whether what he meant to do might place him in the felons' dock. Thus Erie was wholly given over to the control of the ring. No one seemed any longer to dispute their right and power to issue as much new stock as might to them seem expedient. Injunctions had failed to check them; receivers had no terrors for them. Secure in their power, they now extended their operations over sea and land, leasing rail-

roads, buying steamboats, ferries, theatres, and rolling-mills, building connecting links of road, laying down additional rails, and generally proving themselves a power wherever corporations were to be influenced or legislatures were to be bought.

Christmas, the period of peace and good-will, was now approaching. The dreary arguments before Judge Cardozo had terminated on December 18th, long after the press and the public had ceased to pay any attention to them, and already rumors of a settlement were rife. Yet it was not meet that the settlement should be effected without some final striking catastrophe, some characteristic concluding tableau. Among the many actions which had incidentally sprung from these proceedings was one against Mr. Samuel Bowles, the editor of the Springfield Republican, brought by Mr. Fisk in consequence of an article which had appeared in that paper, reflecting most severely on Fisk's proceedings and private character, — his past, his present, and his probable future. On the 22d of December Mr. Bowles happened to be in New York, and, as he was standing in the office of his hotel, talking with a friend, was suddenly arrested on the warrant of Judge McCunn, hurried into a carriage, and driven to Ludlow Street Jail, where he was locked up for the night. This excellent jest afforded intense amusement, and was the cause of much wit that evening at an entertainment given by the Tammany ring to the newly elected Mayor of New York, at which entertainment Mr. James Fisk, Jr., was an honored guest. The next morning the whole press was in a state of high indignation, and Mr. Bowles had suddenly become the best advertised editor in the country. At an early hour he was of course released on bail, and with this outrage the second Erie contest was brought to a close. It seemed right and proper that proceedings which throughout had set public opinion at defiance, and in which the Stock Exchange, the courts, and the legislature had come in for equal measures of opprobrium for their disregard of private rights, should be terminated by an exhibition of petty spite, in which bench and bar, judge, sheriff, and jailer, lent themselves with base subserviency to a violation of the liberty of the citizen.

It was not until the 10th of February that Judge Cardozo

published his decision setting aside the Sutherland receivership, and establishing on a basis of authority the right to over-issue stock at pleasure. The subject was then as obsolete and forgotten as though it had never absorbed the public attention and another "settlement" had already been effected. The details of this arrangement have not yet been dragged to light through the exposures of subsequent litigation. But by careful reading between the lines, it is easy to see how a combination of overpowering influence may have been effected, and a guess might even be hazarded as to its objects and its victims. The fact that a settlement had been arrived at was intimated in the papers of the 26th of December. On the 19th of the same month a stock dividend of eighty per cent in the New York Central had been suddenly declared by Vanderbilt. Presently the legislature met. While the Erie ring seemed to have good reasons for apprehending hostile legislation, Vanderbilt, on his part, might have feared for the success of a bill which was to legalize his new stock. But hardly a voice was raised against the Erie men, and the bill of the Central was safely carried through. This curious absence of opposition did not stop here, and soon the two parties were seen united in an active alliance. Vanderbilt wanted to consolidate his roads; the Erie directors wanted to avoid the formality of annual elections. Thereupon two other bills went hastily through this honest and patriotic legislature, the one authorizing the Erie Board, which had been elected for one year, to classify itself so that one fifth only of its members should vacate office during each succeeding year, the other consolidating the Vanderbilt roads into one colossal monopoly. Public interests and private rights seem equally to have been the victims. It is impossible to say that the beautiful unity of interests which led to such results was the fulfilment of the December settlement; but it is a curious fact that the same paper which announced in one column that the consolidation and Central scrip bills had gone to the Governor for signature, should, in another, have reported the discontinuance of the Belmont and Whelpley suits by the consent of all interested.* It may be that public and private interests were

* See the New York Tribune of May 10th, 1869.

not thus balanced and traded away in a servile legislature, but it looks very much as if they were, and as if the settlement of December had made white even that of July. Meanwhile the conquerors — the men whose names had been made notorious through the whole land in all these infamous proceedings — walked erect and proud of their notoriety through the streets of our great cities, and looked those whom they had defrauded in the face, and boasted of their deeds and of their contempt for law and of their immunity from punishment, and still men were found to prate of the advancing tone of public opinion in free America.

Comment would only weaken the force of this narrative. It sufficiently suggests its own moral. The facts which have been set forth cannot but have revealed to every observant eye the deep decay which has eaten into every part of our social edifice. No portion of our system was left untested, and no portion showed itself to be sound. The stock exchange revealed itself as a haunt of gamblers and a den of thieves; the offices of our great corporations appeared as the secret chambers in which trustees plotted the spoliation of their wards; the law became a ready engine for the furtherance of wrong, and the ermine of the judge did not conceal the eagerness of the partisan; the halls of legislation were transformed into a mart in which the price of votes was higgled over, and laws, made to order, were bought and sold; while under all, and through all, the voice of public opinion was silent or was disregarded.

It is not, however, in connection with the present that all this has its chief significance. It speaks ominously for the future. It may be that our society is only passing through a period of ugly transition, but the present evil has its root deep down in the social organization, and springs from a diseased public opinion. Failure seems to be regarded as the one unpardonable crime, success as the all-redeeming virtue, the acquisition of wealth as the single worthy aim of life. Ten years ago such revelations as these of the Erie Railway affairs would have sent a shudder through the community, and would have placed a stigma on every man who had had to do with them. Now they merely incite others to surpass them by yet bolder outrages and more corrupt combinations.

One leading feature of these developments is, from its political aspect, especially worthy of the attention of the American people. Modern society has created a class of artificial beings who bid fair soon to be the masters of their creator. It is but a very few years since the existence of a corporation controlling a few millions of dollars was regarded as a subject of grave apprehension, and now this country already contains single organizations which wield a power represented by hundreds of millions. These bodies are the creatures of single States; but in New York, in Pennsylvania, in Maryland, in New Jersey, and not in those States alone, they are already establishing despotisms which no spasmodic popular effort will be able to shake off. Everywhere, and at all times, however, they illustrate the truth of the old maxim of the common law, that corporations have no souls. Even now the system threatens the central government. The Erie Railway represents a weak combination compared to those which day by day are consolidating under the unsuspecting eyes of the community. A very few years more and we shall see corporations as much exceeding the Erie and the New York Central in both ability and will for corruption as they will exceed those roads in wealth and in length of iron track. We shall see these great corporations spanning the continent from ocean to ocean, — single, consolidated lines, not connecting Albany with Buffalo, or Lake Erie with the Hudson, but uniting the Atlantic and the Pacific, with *termini* at New York and San Francisco. Already the disconnected members of these future leviathans have built up States in the wilderness, and chosen their attorneys Senators of the United States. Now their power is in its infancy; in a very few years they will re-enact, on a larger theatre and on a grander scale, with every feature magnified, the scenes which were lately witnessed on the narrow stage of a single State. The public corruption is the foundation on which corporations always depend for their political power. There is a natural tendency to coalition between them and the lowest strata of political intelligence and morality; for their agents must obey, not question. The lobby is their home, and the lobby thrives as political virtue decays. The ring is their symbol of power, and the ring is the natural enemy of political purity and independence. All this was abundantly illus-

trated in the events which have just been narrated. The existing coalition between the Erie Railway and the Tammany ring is a natural one, for the former needs votes, the latter money. This combination now controls the legislature and courts of New York; that it controls also the Executive of the State, as well as that of the city, was proved when Governor Hoffman recorded his reasons for signing the infamous Erie Directors' Bill. It is a new power, for which our language contains no name. We know what aristocracy, autocracy, democracy are; but we have no word to express government by moneyed corporations. Yet the people already instinctively seek protection against it, and look for such protection, significantly enough, not to their own legislature, but to the single autocratic feature retained in our system of Government, — the veto by the Executive. Through this Governor Hoffman won and lost his reputation in New York, and it is to the possible use of this same power by President Grant, in Washington, that the people look for security from the misdeeds of their own representatives done under the influence of corporate wealth. The next step will be interesting. As the Erie ring represents the combination of the corporation and the hired proletariat of a great city, as Vanderbilt embodies the autocratic power of Cæsarism introduced into corporate life, and as neither alone can obtain complete control of the government of the State, it, perhaps, only remains for the coming man to carry the combination of elements one step in advance, and put Cæsarism at once in control of the corporation and of the proletariat, to bring our vaunted institutions within the rule of all historic precedent.

It is not pleasant to take such views of the future; yet they are irresistibly suggested by the events which have been narrated. They seem to be in the nature of direct inferences. The only remedy lies in a renovated public opinion; but no indication of that has as yet been elicited. People did indeed, at one time, watch these Erie developments with interest, but the feeling excited was rather one of amazement than of indignation. Even where a real indignation was excited, it led to no sign of any persistent effort at reform; it betrayed itself only in aimless denunciation or in sad forebodings. The danger, however, is day by day increasing,

and the period during which the work of regeneration should begin grows always shorter. It is true that evils ever work their own cure, but the cure for the evils of Roman civilization was worked out through ten centuries of barbarism. It remains to be seen whether this people retains that moral vigor which can alone awaken a sleeping public opinion to healthy and persistent activity, or whether to us also will apply these words of the latest and best historian of the Roman republic: "What Demosthenes said of his Athenians was justly applied to the Romans of this period; that people were very zealous for action so long as they stood round the platform and listened to proposals of reform; but, when they went home, no one thought further of what he had heard in the market-place. However those reformers might stir the fire, it was to no purpose, for the inflammable material was wanting." *

CHARLES F. ADAMS, Jr.

ART. III. — 1. *Die Religion der Griechen.* Von J. A. HARTUNG. Erlangen. 1836. 8vo.

2. *Prolegomena zu einer wissenschaftlichen Mythologie.* Von KARL OTTFRIED MÜLLER. Göttingen: Vandenhoeck und Ruprecht. 1825.

IT has been common to regard the polytheism of the Greeks and Romans as an utterly false, corrupt, and corrupting system of belief; their mythology as merely a series of graceful fables, springing from the fancy, or at best a mystic and symbolical presentation of great truths. Even those who, like the creators of the modern science of comparative mythology, rise to the conception of the fundamental unity of the religious idea, are in the habit of dwelling more upon the historical unity of origin than the essential unity of spirit. They trace with skill and insight the evidences of identity, but are apt to neglect what is individual and distinctive in religions.

* Mommsen, Vol. IV. p. 91, referring to the early Ciceronian period, B. C. 75.

Comparative mythology is therefore partial and incomplete, hardly less so than the older mythological systems. If these overlooked one important series of facts, it overlooks another, not less important. It is not necessary to pass in review the old, exploded systems,—the allegorical interpretation, by which the gods were transformed into mere personifications of qualities; Euhemerism, which regarded them as deified men; and that form of symbolism which conceived a whole system of faith to have been invented by priests and rulers as an engine of government or an instrument of education. All these were given up long ago. A rational and scientific interpretation of mythology — at least on any considerable scale — was first reached by the distinguished Karl Ottfried Müller, whose principles of investigation have served as the foundation of the most successful subsequent inquiries. This great scholar adopted in the main the principles of interpretation now generally accepted, which treat the myths as the expression of a religion of nature; but he discovered the necessary limitations of these principles, and observed a moderation in applying them practically which his followers would often do well to copy. His special service to the science, however, lay in introducing into it the method of analysis, treating the myths as the results of a gradual growth and various origin, and resolving them into their simple original elements. This is the method that has led to the important discoveries made since his day. In applying this process in detail, he no doubt errs in insisting overmuch on the essential originality of the Greeks, and lays more weight upon the local origin of myths than would scholars of the present day, although in one remarkable passage he anticipates the general truths of comparative mythology. His mistakes are just in the opposite direction from those of his namesake, Max Müller, and his *Prolegomena* will serve very well to balance the extreme views of the latter.

In saying that comparative mythology is partial and incomplete, I mean merely that it has its own scope and its own limitations, and that, in the hands of its lesser and too enthusiastic votaries, it is sometimes in danger of overstepping its natural limits. Comparative philology, too, is necessarily partial and incomplete when applied to the grammar of any one

language ; it treats of its general and fundamental nature, but not of its individual character. Thus, Professor Max Müller teaches us wherein the mythology of the Greeks is identical with that of the cognate races ; and if he attempted to do more than this, he would cease to teach comparative mythology. But when the primitive religion of the Aryan race shall have been thoroughly explored, then will come the time for a truly scientific treatment of Greek mythology by itself, taking the truths of general mythology as a basis, but not forgetting that the Greeks themselves were a great creative force, and that nine tenths of their mythology is purely their own. Even now it would be possible to come much nearer such a treatment than Mr. Cox has done in his excellent little treatise, and my aim in the present article is to call attention to certain points of view which he has overlooked, especially in regard to the connection of the Greek mythology with the Greek religion.

The original and individual side of the Grecian belief is not, however, the only nor the most important feature in their religion which needs to be insisted upon. We are accustomed to look to the Hebrew theology as the sole foundation of our Christian monotheism, and do not at once perceive that it lacked an important element which is found in Christianity — whether inherited from the classic civilizations, or traceable to the Indo-European origin of Christian nations, we will not undertake to say. From whichever source derived, it appears at any rate to be a common feature of the Indo-European theology, and to form a strong contrast between this and the Semitic. I refer to the idea of the immanence of the Deity in nature. When we compare the Greek and Hebrew systems with each other, and call the one polytheistic, the other monotheistic, we are guilty of an injustice. The Jews did not, any more than the Greeks, comprehend at first the idea of one sole and all-powerful God. The plurality of the godhead in the earliest Hebrew records is a familiar fact; and the progress from this to the pure monotheism of the later prophets is very gradual. And even when the Jews had advanced to the conception of Jehovah, it was still for a long time not as the one omnipotent ruler of the earth, but as the special god of the Hebrew people. Other nations had their gods, and real gods, but Jehovah was the strongest of

all. He was their God, who brought them up out of the land of Egypt, the God of Abraham, of Isaac, and of Jacob. It would have been rank blasphemy to have spoken of him as the god of Pharoah and Nebuchadnezzar as well. From this idea of a national god, more powerful than the gods of other nations, a loftier religious sense easily developed the idea of one only God, creator and governor of the universe; and in the sacred hymns and the prophecies of this period we have the sublimest utterances of all time in the devout recognition of the Supreme Being.

The polytheism of the Greeks was different in its nature from that of the Hebrews. Of course neither could be wholly devoid of the distinctive characteristics of the other, for these grew out of the very nature of man. Among the Greeks there exist here and there traces of the worship of national or tribal divinities; and the Hebrews were not wholly without a sense of the divine spirit dwelling in nature. All distinctions of race consist rather in the predominance of certain qualities than in the exclusion of others. Each set of dogmas then was developed from an independent, equally vital truth. The Jew derived his from the unity and supremacy of the godhead, one and supreme within its special sphere — the national life. The Greek, on the other hand, started from the immanence of the divine power, inhabiting, inspiring, and vivifying every living thing, nay, every inanimate object, and every action of life. His faith was a sort of pantheism, — a belief not in one God pervading all nature and identified with nature, but in millions of gods, — a god for every object, for every act. Thus pure fetich-worship was not unknown among them. Apollo was worshipped under the form of a pointed pillar, the Paphian Venus under that of a conical stone; the *Omphalos* at Delphi and the sacred olive-tree on the Acropolis were fetiches; the eagle of Zeus, the serpent of Asclepios, the ivy of Dionysus, were conceived of as in a peculiar sense the residence of the spirits of these gods. And although the Greeks and Romans outgrew fetichism, they never outgrew this, its fundamental principle; to them, nature was always alive, and if alive, then animated by divine spirits. Thus *Jupiter* means "heaven-father," the god or spirit who inhabited the heavens; while *Demeter* is "earth-mother."

The Latin word (*deus*) indeed that we translate god meant hardly more than our word *spirit;* it was applied to the spirits of the departed, as well as to the gods of the Pantheon. "If I am to live after death," Cyrus is represented as saying to his friends (Cicero, de Senectute, 22), "reverence me as a god." The marvellous imagination of the Greeks speedily developed this fundamental idea into a complete Olympus, with its greater and lesser gods, its gods of the upper and of the lower world, its theogony, its dynasties. The more earnest and practical Roman, on the other hand, preserved to the latest day his custom of deifying even trivial acts and abstract qualities. The vow of a temple to *Pallor* and *Pavor* (paleness and panic fear) saved a battle for Tullus Hostilius; *Honor*, *Pudicitia* (Modesty), and *Fors Fortuna* (Fortune) had their temples; every baker's shop contained a shrine of *Fornax* (goddess of the oven); even mildew (*Robigo*) and manure (*Stercutus*) were reverenced as gods. To this practical and unimaginative character of the Romans it is due likewise that they had almost no mythology, — only an earnest sense of religious duty, and a devout observance of forms of worship, which degenerated at last into endless ritual and ceremony.

It appears to me, therefore, that those who undertake to defend the Greek forms of faith, on the ground that their polytheism was after all only a disguised monotheism, or who seek to find in the Greek theology an identity with Christian theology, make a fundamental mistake. It is true that there are glimpses here and there of monotheistic conceptions, and many analogies, especially in the tragedies of Æschylus, with some of the sterner doctrines of Christianity; but these are only occasional and individual exceptions. We must maintain, first, that their religion, as a whole, was *essentially* polytheistic; and secondly, that this polytheism was not a corrupted monotheism, but was developed out of a primitive fetichism. It is time lost to try to justify the Hellenic religion from a Hebrew or dogmatically Christian point of view; its real value is in complementing Hebraism by the element it lacked. Thus Hartung remarks (Tom. I. p. 36) that the Jewish and Persian accounts of the creation assume the performance of a specific act at a special time, while "the ideas expressed in

the other cosmogonies agree completely with the views of our natural philosophers, according to whom the earth, with its product and creatures, has been forming from eternity in the precise manner in which we see it developing and forming before our eyes"; and in support of this statement he adduces the words φύσις and *natura*, both of which mean "growth."

It is not my intention at this time to speak at any length of the interpretation of myths. My subject is rather the bearing of the mythological notions upon the religious faith of the Greeks. I desire, however, to express my agreement with a recent writer in this review (January 1869, p. 314) in condemning the habit of the present school of mythology of applying its principles of comparison to all details and incidents indiscriminately. He gives excellent illustrations of the true method of interpretation, in the myths of Charlemagne and the Werewolf, which are shown to contain that combination of ideal and real which K. O. Müller holds to be the essential character of the myth. Further, it should not be forgotten, as the writer last mentioned shows, that there are two classes of myths; and that, while the oldest and most complicated spring exclusively from a popular and spontaneous interpretation of nature, the second class, although genuinely mythical, approach allegory, and are the results of the later conscious thought of men. Examples of this class (which abound in Hesiod) are Prometheus, Atlas, and Pandora.

The faith of the Hellenic people in regard to spiritual things may be treated from three points of view: as mythology, in so far as it appealed to the fancy; as theology, in so far as it was dealt with by the intellect; as religion, in so far as it was connected with the life. Of course these three views cannot be wholly separated from one another, and it would often be hard to say of any one conception that it was, for instance, theological rather than mythological or religious. But although the material is for the most part precisely the same, it appears to me that we obtain the deepest insight into the mythology of a people, by examining the relation in which it stands to their religious faith.

The earliest Greek religion appears to have been of purely Aryan origin, — the worship of Zeus (*heaven* or *sky*), without

temple and without image. This was, as we have said, a heritage from the primeval times of the race; but, as is remarked in the article to which we have already referred, no branch of the race, except that to which the Greeks and Italians belonged, appears to have made this common divinity its chief god. "The people of Iran quite rejected him; the Teutons preferred Thor and Odin; and even in India there is no evidence that Dyaus took permanent precedence of Indra." In those earliest times which we call Pelasgian, whatever that may mean,—and it seems certain, at any rate, that the Pelasgians were not foreign to the Hellenes,—Zeus was the one god everywhere worshipped. This universality and pre-eminence of his worship continuing through the periods that followed, and becoming, of course, more firmly established in proportion as the idea of monotheism gained admittance, the chief god might easily become the one only God. By the side of Zeus was Dione (Juno), the feminine side of his being; for the fine sense of the Greeks rejected the duality of the divine nature held by the Asiatic religions, and in its place conceived its gods in pairs, male and female. Hera, the mistress (*Herrin*), would appear to be only an epithet of the queen of heaven.

What other gods enjoy an equal antiquity with Zeus it is hard to determine. Comparative philology has not yet completed its work, and it must be borne in mind that the higher antiquity of a name does not necessarily carry with it an equal antiquity of eminence. Thus Ouranos, a wholly unimportant divinity among the Greeks, was identical with one of the chief gods of India, Vaduna. Hestia (Vesta), the goddess of the hearth, perhaps the only other deity common to the Greeks and Romans, unquestionably belongs to the earliest period. Her sphere would naturally be widest, and her importance greatest, in those distant epochs when the family was not yet developed into the state. Athene (Minerva), the dawn, daughter of Zeus, the sky, and Hermes* (Mercury), the twilight, are probably well established as a portion of the common Aryan inheritance, even although the Italian races lost the memory of them in

* Hartung, from whose eminently sensible treatise we have derived much of our material, questions (p. 216) this identification of Hermes with Sârameyas, and rejects, indeed, much of the fanciful interpretation in which Max Müller and his disciples abound.

this form. Others of the chief gods, if already recognized and worshipped, would seem not yet to have attained their later rank. The family circle of Olympus did not yet exist. For the Pantheon of the Greeks was full of change and development. A people so intensely local in their attachments and their political institutions could not fail to localize myths and religious institutions. Athene was the special divinity of Athens, Hera of Argos, Zeus of Ægina, Apollo of Miletus, and every town and every district had its own memories of the times when the gods appeared on earth. But, on the other hand, a people so restless and enterprising could not fail to carry abroad these stories, and extend these forms of worship to other neighborhoods; and in the process we can well guess how materially they must have been altered and confused. So arose this minute, intricate, and complex network of mythology, largely modified in later times by poets and artists, and still more by philosophers and logographers.

As I have said, it is my intention to speak of this mythology only in so far as it may throw light upon the religious nature of the Greeks. Of the connection between the two, the point I am about to mention will, perhaps, be found a good illustration. It is a curious fact, which Hartung notices (p. 188), that nearly all the fully developed gods have by their sides elementary spirits of a precisely equivalent range of powers, as Zeus and Ouranos (heaven), Demeter and Ge (earth), Poseidon and Oceanus (ocean), Apollo and Helios (the sun), — the one in each case being an individualized, anthropomorphized god, the other a mere *dæmon*. How were these two classes related to each other? Were the Olympic gods, as the theogony says, the descendants and successors of the elementary spirits, or were they developed afterwards, for the purposes of the theogony? It may be remarked that Zeus, Demeter, Poseidon, and Apollo were themselves nothing but elementary spirits at first, just as Dyaus continued to be in the Indian mythology. And the worship of Ocean, Sky, Earth, and Winds (see Æschylus, Prometheus, v. 88) seems too firmly rooted in the popular faith to be a mere invention of theogonists. Perhaps the truth is, that the worship of these elementary spirits was really later, but as genuine and popular as the other. When the meaning of Zeus had

been forgotten, and the name had become that of a personal god, inhabiting the sky and controlling the operations of the weather, what more natural than that the simple-minded people should go over the process again, and deify the sky under its Greek name Ouranos, as their ancestors had once done under the primitive name Dyaus? But Ouranos and the gods of his class were only the objects of individual worship, not of any set and established forms (*Cultus*), and were therefore considered to belong to an old dethroned dynasty. Was not this again an indication of newness? They were recognized as gods, but the time-honored rituals and sacrifices were all attached to the established worship of the older deities. Moreover, a name that was used by a Greek every day with the meaning *sky* could still be applied to the spirit of the sky, but could not easily be so far disengaged from common associations as to be regarded as a personal god.

These remarks in regard to the worship of the elementary spirits Ouranos, Ge, Helios, as distinguished from the corresponding personal deities Zeus, Demeter, Apollo, lead naturally to the consideration of the more striking movements which established new forms of popular faith, sometimes in the way of introducing a foreign god, sometimes of bringing a genuine Greek divinity into new prominence, by a kind of religious revival. This was the source of much of the variety and complication in the Greek religion, and it opens perhaps the most interesting inquiries in this field.

Ernst Curtius says, in the first volume of his Griechische Geschichte (p. 96): —

"A form of worship once established was never laid aside in Greece, but was preserved as sacred, and was united with the later services. Thus in Athens, Olympia, and Delphi an originally Poseidonian period [Poseidon, or Neptune, being the special divinity of the maritime Greeks] is clearly to be recognized, with its ever-enduring usages of sacrifice. In this way were developed different strata, as we may call them, which are repeated in regular succession in all the more important homes of the Hellenic religion, and which, if carefully examined and compared, show the various stages of development of the national consciousness, in the same manner as the gradual formation of the surface of the earth is indicated in the succession of geological strata.

Certain epochs may be recognized with sufficient clearness, especially in the cases in which the introduction of the new worship led to conflicts of which the remembrance survived. For even in heathendom, by the side of the thoughtless reception of everything new, we find an earnest feeling, a fidelity towards the old gods and their purer, simpler worship, as Herodotus relates of the Caunian mountaineers that, in complete panoply, lance in hand, they drove the intrusive gods of the strangers out of their borders."

The comparison here made with geological strata is a very exact one, for not only have the successive religious periods left their traces in a distinguishable form, but the history of these changes, too, lies far back beyond what we call historical times, that is, beyond contemporary record or direct tradition. These events, neglected by most writers upon mythology, are a favorite topic with the historian just quoted. Dim and fragmentary as is all the knowledge that we can gain in regard to them, it is easy to distinguish two classes of religious epochs.

First and most familiar is the introduction of essentially foreign gods, and their naturalization in the Greek Pantheon. The Phœnicians, the earliest seafarers, who had their factories all along the Grecian coast, were the chief source from which foreign gods were derived; and these settlements began so far back in time that their Aphrodite, Melikertes, and Adonis almost wholly laid aside their foreign character, and became to all intents and purposes Greek divinities. Curtius points out that there were two distinct periods of Phœnician influence, corresponding to the historical periods in which the two chief cities of the Phœnicians respectively enjoyed pre-eminence. The mariners of Sidon first carried the religion of Astarte into her colonies; and Cyprus, and Cythera in especial, became afterwards the seats of the Grecian representative of Astarte, — Aphrodite (Venus), "the goddess of the creative powers of life, pervading all nature; also a goddess of harbors." With her was joined Adonis, whose death is the symbol of the sleep of nature as winter comes on, and whose festivals were widely celebrated, especially by the Orientals.*

Even more widely spread at first, if less so in the end, was

* See the translation of the hymn to Adonis in Matthew Arnold's essay on Pagan and Mediæval Religious Sentiment.

the worship of the special god of Tyre, Melkart. He, too, was a maritime god, and as such was received by the Greeks under the name Melikertes. But oftenest he was identified with the Greek Herakles, the pioneer god, who prepared the way for civilization, which is precisely what the votaries of Melkart did in the territory of Greece. It was the Phœnicians who, under his name, prepared the land for habitations, dammed the rivers, drained the swamps, built roads, bridges, and harbors. Thus there was a Grecian and an Oriental Herakles, and the Tyrian Melkart was partly identified with the latter of these, partly known under his own name, Hellenized, — Melikertes. Hence conflicts and religious struggles. "If now," says Curtius, "Phœnicians penetrated far into Bœotia, if they once ruled the whole coast of the Crissæan Sea, what is less improbable than that the sanctuary of Apollo [at Delphi] was invaded, and his authority resisted by the barbarians and their gods? Oriental and Hellenic divination enter here into the most violent antagonism. Herakles therefore overturns the mantic tripod of Apollo, and, as Apollodorus says, establishes his own oracle; he insults the god with impudent, blasphemous questions, and lays waste his sanctuary, so that its place on earth may be forgotten. It is easy to see that this is not an individual uprising against a recognized authority, but a great national conflict, which can be decided only by the total overthrow of one or the other." *

Whether Poseidon (Neptune) was also a Phœnician god, as the author of an able article in the Quarterly Review for January, 1868, maintains, cannot perhaps be definitely decided. Gerhard, in his monograph upon Poseidon, declares for his foreign origin; and it is at all events a significant fact that Oceanus, the counterpart of Poseidon, appears personally in Homer, while Ouranos seems to have been of later origin.

Another Oriental people, who affected powerfully the religion of the Greeks, was the Egyptian, although this influence, like that of the Etruscans over the Roman religion and institutions, has been exaggerated. This Egyptian influence was, in truth, much later than the Phœnician, and of a totally

* Herakles der Satyr und Dreifussräuber, a monograph read before the Archæological Society of Berlin, at the Winckelmann festival, 1852.

different character. It has been transmitted to Christianity, not by the Greeks, but by the Hebrews. The Phœnicians carried their religion to Greece; the Greeks themselves brought whatever they borrowed from Egypt. There is no proof that the fundamental faith of the Greeks was materially modified by the Egyptians; but after the Greek system had been fully established, and analogies and supposed identities were discovered in the Egyptian theology, its practical workings received a profound impression from the latter, not, however, as a new religion, but in a way to be described presently.

When, just now, we made a distinction between the introduction of foreign gods and the springing up of popular revivals in native worship, we ought perhaps to have made the contrast less marked; for these revivals were always in the shape of the extension of a special worship, and often passed as an importation from abroad. The distinction, however, lies in this, that these new gods, if foreign to continental Greece, belonged at any rate to the Greek race, and accompanied the migrations or conquests of Grecian tribes. Such revivals are quite analogous to the religious awakening which has at different times followed the preaching of such men as George Fox and John Wesley, and the new religions which they established were not unlike the new sects of Fox and Wesley. But while Methodism, for instance, was a pure outgrowth of Christianity, the Greek theology seems to have lacked the power of developing by itself such interior and vital movements. It looked outside for its stimulus, especially to Asia Minor, where the Greek race came directly in contact with the passion and fanaticism of the Orientals. Asia Minor, therefore, was the source of nearly all such movements. And it is surprising how many of the Grecian divinities have this external origin ascribed to them. "With the exception of Zeus, the dweller in the heavens," says Curtius, "there was scarcely a single Grecian deity who was not regarded as having migrated thither [to Greece], and whose service was not connected with old myths and rites which had their root beyond the sea." Many such intimations are slight and half forgotten; it will be sufficient here to allude to two of the most interesting. While the group of the Olympic gods received the wisest and deepest rever-

ence of the Hellenic people, and the worship of them constituted the established religion, there were two sects, as we may call them, which exercised a peculiarly strong practical influence; or rather the earnest religious sentiment of the Greeks expressed itself in two other forms, — in the worship of Apollo, and in that of the Chthonian group of deities (the deities of the earth), Demeter and Dionysus especially.

"In the worship of Apollo," says Curtius, "the Hellenic polytheism reached its culmination, and found the brightest development of which it was capable." Wherever it went it carried with it a calmness, elegance, and sober strength, which make this god peculiarly the representative of whatever is highest and purest in Grecian thought. As the god of light, he dispelled the darkness of the mind; he knew the future, and therefore was the refuge of perplexed and earnest spirits; his companions were the Muses and Graces, and with this group were associated the loftiest achievements of the human intellect in art and poetry.

Far different was the group of Chthonian deities, with whom were identified the creative powers of nature, with all their mysteries and suggestive lessons. They were worshipped with wild enthusiastic rites, or in solemn mysteries; and as the religion of Apollo embodied the loftiest and calmest spirit of culture, so that of Dionysus (Bacchus) gave scope to whatever fanaticism and zealous self-devotion actuated the Grecian populace, while the mysteries of Demeter (Ceres) satisfied the longings for the occult and preternatural.

The earliest religious conceptions of the Aryan race appear to have been connected with the operations of the sky and atmosphere, — the alternation of day and night, the sun, the moon, the stars, the clouds and winds, dawn and twilight; and these conceptions, as embodied in Zeus, Hera, Apollo, Athena, and Hermes, formed the basis of the religious faith of the Greeks, that which they inherited from the race to which they belonged. But in their own land, they were led by their natural surroundings and their daily employments to look to the earth, rather than the sky, for the objects of their worship. The goddess of the earth, Demeter, and the god of the quickening powers of nature, Dionysus, were the centre of this

new faith. It is true, Dionysus was at first only the god of wine and of drunkenness; but the strange demon of intoxication was conceived to possess a peculiar sanctity, not unlike that of the inspired Delphic hierophants, and the intoxicating drink was endowed with a magical power which seemed the very incarnation of the spirit of life. So the drunken god was clothed with loftier attributes, and regarded as the giver of many good things. A higher and more inspiring set of associations grouped themselves about his worship, until in time the rude dithyramb was developed into the sublime tragedy, and the Dionysiac festivals, rather than those even of Zeus and Athene, attracted to Athens from all parts of the world spectators of taste and culture.

But it was not so much this regular and popular worship of the god that distinguishes him among the Grecian deities, as the Bacchic orgies of foreign origin, which spread through Greece like a contagion, and which were celebrated with strange rites and the wildest excitement among the mountains and in the forest, in imitation, as was believed, of the progress of the god himself, when he "left the golden fields of Lydia and Phrygia, and the sun-beat plains of Persia, and the Bactrian cities, and the rugged land of the Medes, and smiling Arabia," and swept over Greece with his train of satyrs, nymphs, and mænads. It was not as a benefactor merely that he came now; he was no longer simply the giver of the vine and the instructor in the arts of life. It was a new god that came in triumphal march, like a conqueror, claiming reverence and homage rather than bestowing blessings. The blessings he now bestowed were spiritual ones, kindling the flame of emotion, and exciting the religious sentiment, and the rapture and ecstasy of devotion were themselves a sufficient reward to the pious heart. This orgiastic worship of Dionysus, which met the craving of the human soul for the emotional in religion, did not, nevertheless, make its way without resistance, — resistance fiercely overcome, and symbolized in the bloody fate of Lycurgus and Pentheus.

One shape which this new religion of Dionysus took was that which commemorated the sufferings and death of the god and his revival, — the type of the suspension of the life of nature in the winter and its renewal in the spring. In these services his

name was Zagreus, and the rites of this worship were peculiarly solemn and earnest. This same idea was incorporated in the Egyptian story of Osiris, a god identical with Bacchus, not in specific origin, but in the far higher sense of representing the same powers of nature, springing from the same human sentiments, and meeting the same human needs. This identity, easily discerned when the two nations came in contact, led to the mystic doctrines of the Orphic philosophers, of which we shall say a word presently. The myth of Adonis, too, was, as I have already said, only another expression of the same natural fact. This was very wide-spread, and enjoyed a high popularity.

This is the point at which the religion of Dionysus touches that of Demeter; for the rape of Proserpine (Persephone, daughter of Demeter) is another form in which the fact of the sleep of nature in winter was symbolically clothed. The worship of Demeter, in its orgiastic form, was not nearly so general as that of Dionysus. It possessed, too, a more sober development and a higher character. As the religious passion, uncontrolled by reason, found its expression in Bacchanalian rites, so the equally natural leaning of the human mind to the occult and mystic connected itself with the service of Demeter. The Eleusinian mysteries were sacred to Demeter, Dionysus, and Kora (Persephone), and in them this mysticism was developed into a religious philosophy, the highest, perhaps, of which the Grecian polytheism was capable. What these mysteries were, and what the occult doctrines taught in them, cannot now be known with any exactness. Enough, however, can be gathered from the allusions of poets and philosophers to show that their character was high, and their influence good.

It is an excellent illustration of the elasticity of polytheism, and of the ease with which its deities passed into each other's spheres and assumed each other's attributes, — or, it would be more correct to say, the readiness with which attributes were assigned to the representative now of one phase of nature, now of another, — that this orgiastic character was not confined to the worship of the Chthonian deities, even including Cybele. The Lemnian worship of Hephæstos (Vulcan) was of the same character, and the Cretan Zeus was the object of services entirely analogous.

It was easy for one tribe to assign to the god of the atmosphere the same characteristics which another assigned to the god of the vine. In Latium indeed Jupiter was distinctively the god of the vine; and it was not until the Italians came in contact with Greek mythology that they identified Bacchus with their own Liber, who had originally a quite different sphere and character.

The seventh and sixth centuries before Christ were peculiarly a period when a new religious need was felt, and this new stimulus of the worship of Dionysus and Demeter was welcomed. It was a period of disorder and despondency, like the one just preceding the Protestant Reformation; the old era had passed away, and the new — that of the glory of Greece — was not yet come. The oppression, sorrow, and sacrilege of this time called for a religious remedy no less than a political one; so Epimenides preceded Solon, purification and religious impulse went before the lawgiver. The Orphic philosophy was a part of this same movement. "It was immediately allied with magic," says Hartung, and it was intrinsically Oriental in its nature. "Not without reason did the Egyptian priests maintain that Orpheus had learned and derived everything from them." But here I touch upon the progress of the religious faith of the Greeks in historical times, while my plan confines me to its mythical history. It was, perhaps, permissible to overstep the limit in regard to this single event, because it is directly analogous to the earlier impulse which founded the worship of Dionysus and Demeter.

I have thus sketched the relations of the Greek mythology to the Greek religion, sufficiently, perhaps, to show the direction in which Mr. Cox's Manual needs to be complemented. If I had undertaken to follow out the line of inquiry which I have suggested, it would have led to a full discussion of the sentiments, opinions, and usages of the heroic times; for in those times everything was based upon religion. Every year new knowledge is acquired in regard to the primitive religious ideas of the Aryan race, and a further and more detailed treatment of the subject may very well be deferred until a future day.

W. F. Allen.

ART. IV. — 1. *Public Health.* Reports of the Medical Officer of the Privy Council. 1858 – 1867. 10 vols. 8vo.

2. *Twentieth Annual Report of the Poor Law Board.* 1867 – 1868. 8vo.

3. *First Report of the Commissioners on the Employment of Children, Young Persons, and Women, in Agriculture.* With Appendix. Part I. Appendix, Part II., to First Report. 1868. 2 vols. fol.

IN a speech at an agricultural dinner in Shrewsbury, on the 16th of January last, Lord Granville, a member of the present ministry, speaking in a characteristic vein of cheerful optimism, said: —

"He had known England during a political life extending over thirty years. He had seen the country ruled by different ministers; he had seen different parties in power; he had seen it not insensible to the occurrence of great and portentous events in other parts of the world; he had seen it suffering from adverse elements, and from a deficient season of harvest; and yet during the whole of that time it had appeared to him that England, of which they were all so proud, had been increasing in all that constitutes the greatness of an empire. Its wealth had been greatly increased, the level of general intelligence had been raised, the manners of the people softened, and the hostile feeling between class and class had been done away with." *

Such a state of society as is here depicted appears eminently satisfactory, but another and very different view of the social condition of England is presented by Mr. Goschen, the President of the Poor Law Board, in a speech of the 21st of December last, on his re-election to Parliament after taking office. He said: —

"I have been called to fill an arduous and responsible office. I do not disguise from myself the full weight of that responsibility. Constantly increasing rates, constantly increasing pauperism, millions of money spent, yet without satisfaction, and, infinitely worse, millions of human beings whose very name implies a degradation even in their own eyes, as recipients of parochial relief, — such is the subject-matter with which a President of the Poor Law Board is called upon to deal.

* Report in the Daily News, January 18, 1869.

His sphere is on the dark side of our social system. His province is what I may call the bankruptcy of the million, and it appears to me that the Poor Law, like the Bankruptcy Law, can never give complete satisfaction, because both deal with something deplorable in itself. The utmost we can expect to obtain is to make the best of a bad job. I hope and believe that much may be done to grapple more effectually with that which is a growing evil, for I must speak of a growing evil when we have to face the terrible fact that, in the short space of two years, the pauperism of the metropolis has increased twenty per cent, and that not less than 30,000 paupers * — a number equal to the population of a good-sized town — have been added to the numbers of those who, I might almost say, are closing in upon the industrious portions of certain districts of London, till the ratepayer of to-day himself becomes the pauper of to-morrow." †

No one will accuse Mr. Goschen of exaggeration, but the condition of society indicated by his words is one that may well be called not only deplorable, but alarming. A large portion of the people of England live in poverty so great as to be always on the verge of pauperism. A majority of the working class, in one of the most industrious and richest countries of the world, are habitually underfed, badly housed, and insufficiently clothed. The increase of wealth, of which Lord Granville speaks, is accompanied by an increase of poverty, with its concomitants of suffering, pauperism, ignorance, immorality, and crime. The efforts of the government through the poor-law organization, the efforts of individuals through multitudinous private charities, are ineffectual to prevent the growth of this national malady. The source of the evil is not affected by them.

The question of the issue of this condition of things is of interest not to England alone, but to all civilized nations alike. It is not merely that the fact of the mass of a people falling into such a state is a discredit to the principles upon which modern society is organized, but also that such wide-spread poverty and ignorance produce moral and economic effects

* From the returns of the Poor Law Board, it appears that in the first week of April, 1869, there were in the unions and parishes of London 147,086 paupers, in the proportion of 36,464 in-door to 110,622 out-door. This was an increase of 1,549 upon the numbers of the corresponding period of last year, of 6,297 upon those of 1867, and of 42,753 upon those of 1866.

† Report in the Times, December 22, 1868.

which are not confined in their operation to the limits of the country in which they have their origin. Whatever threatens or injures the moral advance and material prosperity of one of the leading nations of the world threatens and injures those of all others in a greater or less degree.

According to the census tables of 1861, the total population of England and Wales amounted to just over twenty millions of persons (20,066,000). Of these a little less than half (9,289,000) were persons either possessing independent incomes or earning wages; the remainder, principally of course women and children, were dependent on the others.* The increase of population since 1861 may be safely estimated at not less than one per cent annually (the total increase during the preceding decade was twelve per cent), so that at the present time there are probably somewhat less than ten millions of persons in England and Wales who have an income derived from capital, or directly from labor, and somewhat less than twelve million without incomes, dependent on the others.†

Now of the ten million in England and Wales who are in receipt of income or wages, it appears from an examination of the census tables that about one fifth are persons with independent incomes, and about four fifths in receipt of wages.

The population of England and Wales, then, may be roughly divided — and when dealing with such large numbers a rough estimate or division is all that is required to afford safe ground for correct inferences — into two great sections, — one embracing the aristocracy, the professional and commercial classes, the wealthy and well off, the salaried, persons of independent means of whatever name, who amount, including their wives and children, to about five millions; the other embracing all manual laborers, all persons dependent on their wages for livelihood, with their wives and children, all paupers and criminals, and all persons without any recognized means of support, amounting altogether to about seventeen millions.

Such being the approximate general distribution of the popu-

* No note need be taken of 151,000 persons concerning whose position nothing was ascertained.

† The same proportion holds good if we take the numbers for the whole of Great Britain and Ireland; that is, there are a little more than five persons with income or wages to every six persons without income throughout the whole kingdom.

lation, it becomes important to ascertain as nearly as possible the total amount of income of each class, and the average income of the wage-receiving class. The returns of the income tax afford the means of forming a tolerably exact estimate of the incomes of the upper and middle classes. These returns have been discussed by Mr. Baxter, in his essay on "National Income," * and the following table shows the result of his analysis.

UPPER AND MIDDLE CLASSES: DISTRIBUTION OF INCOMES. ENGLAND AND WALES, 1867.

Class of Income.	Number of Assessments.	Aggregate Annual Income.
		£
I. Large Incomes.		
1. £5000 to £50,000 and upwards	7,500	111,104,000
2. £1000 to £5000	42,000	69,440,000
II. Middle Incomes.		
£300 to £1000	150,000	72,912,000
III. Small Incomes.		
1. £100 to £300	850,500	93,744,000
2. Under £100, below the Income Tax	1,003,000	60,000,000
Total	2,053,000	407,200,000

The question of the amount of wages received by the laboring class is difficult to determine, owing to the different rates prevailing in the same occupation in different parts of the country; to the great irregularity in employment, so that large numbers of laborers fail to earn full wages the whole year round; and, finally, to the fact that the powers of laborers in many branches of work diminish at a comparatively early period, after which their wages decrease. In some trades a man is disabled by the time he is fifty years old, or even earlier; in others, as in agricultural labor, he is rarely an effective worker after sixty.

Mr. J. Bailey Denton, who has given much attention to the subject, makes the following statement, in a letter published in the Daily News, October 1, 1868:—

"The weekly earnings of different laborers which fairly represents

* "National Income. The United Kingdom." By R. Dudley Baxter, M. A. London: Macmillan & Co. 1868.

the class known as 'industrial' operatives of towns — including piece-work — may be stated to be as follows: —

		s.	d.		s.	d.
Carpenters and joiners	from	18	0	to	28	0
Sawyers	"	21	0	"	26	0
Bricklayers	average				31	6
Bricklayers' laborers	"				19	6
Brickmakers	from	24	0	to	30	0
Masons	average				30	0
Masons' laborers	"				17	6
Gardeners (exclusive of head gardeners)	"				16	0
Smiths	from	26	0	to	28	0
Brassfounders	"	24	0	"	33	0
Painters	average				28	0
Bootmakers	from	21	0	to	26	0
Tallow-workers (laborers)	average				18	0
Engineers and boiler-makers	from	25	0	to	30	0
Coalminers	"	17	0	"	27	0
Quarrymen (slate)	"	18	0	"	23	0
Carters	"	17	0	"	19	0
Railway laborers (maintenance)	"	15	0	"	20	0
Butchers' men	"	16	0	"	18	0
Police constables	average				20	0
Bakers' men	from	21	0	to	26	6
Cotton-workers	average				18	6
Silk-workers	from	17	0	to	24	0"

In the preceding list, Mr. Denton takes no account of the diminution in the annual income of the laborer from slack work, which is a large element in the account. It would be a very moderate estimate to put it at, at least, ten per cent; probably it is nearer twenty per cent.*

In a letter to the Times of December 16, 1868, Mr. H. G. Somerby, Secretary to the Trustees of the Peabody Fund, says: —

"I have this day obtained from the superintendents of the various blocks of buildings erected by the trust in various districts of London returns of the occupants of every apartment, and the result shows the number of workingmen and laborers for weekly hire to be as follows: 17 shoemakers, 16 blacksmiths, 7 watchmakers, 2 brushmakers, 7

* Mr. Frederick Purdy, principal of the Statistical Office of the Poor Law Board, in the Statistical Journal, Vol. XXIV. p. 353, states that the number of paupers in the five most agrarian districts of England is greater in February than in August by 425,000 against 370,000, or 55,000 persons. This number represents the prevalence of the custom of turning off laborers in the season of slack work.

tailors, 7 painters, 1 glazier, 6 letter-carriers, 12 policemen, 55 porters, 3 draymen, 14 dressmakers and needlewomen, 20 charwomen, 6 compositors, 2 millwrights, 1 staymaker, 1 gasmeter maker, 123 laborers, 4 shopmen, 1 upholsterer, 2 glasscutters, 5 coopers, 3 corkcutters, 1 beadle of a market, 3 boiler-makers, 1 beltmaker, 1 cook, 2 horse-keepers, 2 stevedores, 13 carmen, 2 timekeepers, 19 mariners, 4 rope-makers, 3 riggers, 1 milk-carrier, 1 brewer, 1 window-blind maker, 6 shipwrights, 3 engine-turners, 1 bricklayer, 3 tidewaiters, 2 ship-keepers, 3 lightermen, 1 tinplate-worker, 1 candlemaker, 4 carpenters, 2 bakers to confectioners, 1 ship-scraper, 2 sailmakers, 5 bakers, 1 plumber, and 1 French polisher.

"The average wages earned by these various classes of working men is a fraction above 20*s.* a week. Some, such as the painters, glaziers, compositors, and millwrights, and others, get more when in full work; but as a rule only a proportion of them are fortunate enough to have continuous yearly employment. The lowest wages obtained by others in the Peabody houses is 9*s.* a week. Out of their wages each has a family to maintain, which on an average consists of four or five individuals."

It will be observed that the average obtained by Mr. Somerby, from actual inquiry conducted among workmen and laborers of a high standard of industry, — for only such are admitted to the benefits of the Peabody Trust, — is considerably lower than that given by Mr. Bailey Denton.

Any estimate of the total amount of the income of the laboring class can be but approximate. Mr. Baxter, in the work already cited, discusses the question at some length, and gives the table of results which will be found on the next page. His figures are drawn mainly from the Census Tables, and he reckons the income, not at the full sum of the weekly wages, but with various deductions. It seems probable that he rather under-estimates the sum of the earnings.

The total income of England and Wales, according to this and the preceding table, amounts to £661,929,000, of which £407,200,000 is the income of about two millions of persons of the upper and middle classes, and £254,729,000 is the income, in the form of wages, of about seven and three quarter millions of the working class.*

* If these figures be taken as a basis of calculation, it appears that less than

NUMBER AND EARNINGS OF MANUAL-LABOR CLASS IN ENGLAND AND WALES, 1867.

Employment.	Numbers.	Average Net Annual Earnings of Individual.	Total Net Earnings, less all Deductions.
		£	£
1. Higher Skilled Labor . . (Instrument-makers, engine-drivers, book trades, iron and other manufacturers, building trades, bread-making.)	1,123,000	60 to 73	56,149,000
2. Lower Skilled Labor . . . (Carriers by water, coach and harness makers, hardware, cotton, woollen, and other manufactures, carriers by land, shoemakers, tailors, miners, servants.)	3,819,000	46 to 52	127,921,000
3. Agriculture and Unskilled Labor. . . . . (Farm laborers, quarriers, soldiers, laundresses and needlewomen, &c., &c.)	2,843,000	20 to 41	70,659,000
Total	7,785,000		254,729,000

It would be a mistake to attribute precise accuracy to these tables. But, making allowance for even greater error in them than probably exists, certain important broad conclusions may

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50,000 persons out of nearly 10,000,000 receive between one third and one fourth of the whole income. If we add to the manual-labor class the number of persons not belonging to it whose income is under £100, making 8,788,000 in all, we find that 89 per cent of the classes in receipt of income and wages obtain but 47 per cent of the total income. The average amount of income or wages of the 9,000,000 of those whose annual income or earnings are less than £100 is about £35. Doubling their number by the addition of those dependent upon them, it follows that this enormous mass of the people of England, not far from 18,000,000 in all, is supported on an average annual sum which cannot vary greatly from £17 to £18, or about one shilling a day for each individual. If we take the class with incomes over £100, and estimate its numbers, including dependents, at 2,100,000, it appears that the average annual income of each individual is not less than £165. But dividing this class into two sections, the first comprising those with incomes from £100 to £300, we find the average income of each individual, including dependents, belonging to this section, whose number amounts to about 1,700,000, to be between £55 and £56; while of the second section, namely, that of those whose incomes are over £300, and who, with their dependents, number about 400,000, the average annual income is not less than £633. However far from the exact truth these figures may be, they are not without value as more or less correct illustrations of existing facts.

be drawn from them. An extraordinary inequality in the distribution of wealth is apparent at a glance, and an enormous disproportion between the numbers of the rich and the poor. It is also apparent that a large majority of the inhabitants are poor, — poor not merely relatively, but positively. The great pyramid of English wealth rests on a wide base of poverty and pauperism.

It would be easy to adduce proof of the correctness of these broad conclusions, if there were likely to be any serious question of it. But there is no dispute as to the immense inequality in the distribution of English wealth, and little doubt as to the fact that this inequality is increasing. The members of the laboring classes, as a rule, are unable to lay by enough from their wages to form an accumulation of capital. The capital of the country, or such part of it as is used as an advance for the expenses of production, being in the hands of a small number of persons in proportion to the whole population, its profits, accumulating from year to year, make the rich richer, and widen the distance between them and the poor.

A phrase that has been much used of late is, that the rich are growing richer and the poor poorer. The first part of the phrase is correct, but there is no necessary connection between its two clauses. If there be a progressive increase of poverty, it may be due to far other causes than the increase of the wealth of the rich. Indeed, it would only be through the increase of the wealth of the rich by unjust means, by direct spoliation, or by rendering to the laborer an unfairly small compensation for his share in the work of production, that the increase of poverty could truly be said to result from the increase of the riches of the rich. It would seem that the increase of capital, even if massed in comparatively few hands, in a country largely engaged in production, ought to have a tendency to diminish the poverty of the laboring class, by forming a larger wages-fund from which labor was to receive its compensation. But the condition of a society may be such that the increase of the wages-fund exercises little influence in raising the rate of wages. And such a condition of things probably now exists in England.

The grounds of this conclusion are as follows: The popula-

tion of Great Britain appears to be increasing at a rate too rapid to be kept up with by the progress of improvement in production, using this term in so large a sense as to include every moral and material agency which has a tendency to supply new motives or afford new means of production.*

It was long since pointed out by Mr. Mill that, whenever population makes a more rapid increase than improvement in production, there is a diminishing return to industry. This diminished return falls on the laborer and not on the capitalist. The increase of population increases the competition among the laborers, and the capitalist secures the advantage of this competition in the stationary or lowered rate of wages. The accumulation of his capital is not necessarily used in giving employment to additional laborers; but it may be, and in the present condition of English industry and social customs often is, invested in such a manner as to afford no advantage to the laboring class. Thus the capital from which the wages-fund is derived augments, but there is little or no increase in the rate of wages.

During the last thirty years the capital invested in agriculture has greatly increased, and farming processes, as is well known, have improved, requiring, in some cases, more skilled labor than was formerly employed. Within this period there has been a nominal rise in the average wages of agricultural laborers, to the amount, perhaps, of a shilling or eighteen pence a week, or of from ten to fifteen per cent.† But,

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* "In round numbers, about 240,000 persons are annually added to the resident population in Great Britain. The additional wheat supply required for that number, at an average of six bushels per head, amounts to nearly 180,000 quarters, which, at an average English yield of twenty-eight bushels per acre, represents the produce of upwards of 50,000 acres, and of a much larger average at a lower rate of production." — Mr. Fonblanque's Report, accompanying the Agricultural Returns of Great Britain for 1868, p. 9.

† Mr. Purdy, in an elaborate paper in the *Statistical Journal*, September, 1861, estimated the average weekly wages of men employed in agricultural labor in thirty-four counties, in 1837, at 10*s.* 4*d.*, and in 1860, at 11*s.* 7*d.* Since 1860 there has been a further advance, and the average wages, between a maximum of 18*s.* in the northern counties, and a minimum of 9*s.* in the southern, may be reckoned at between 12*s.* and 13*s.* See statements concerning wages in the First Report of the Commissioners on the Employment of Children, Young Persons, and Women in Agriculture, 1867. Part I.

Mr. Bailey Denton, in the letter already cited, says: "I find that at present the

although this is apparently a considerable rise, it is to be remembered that during this period the value of money has declined, so that its purchasing power is less than of old, and though there has been a fall in the price of some articles required by the laborer, there has been a rise in others. Bread is but very little cheaper; meat and milk are dearer; clothing and fuel have slightly declined in price.* Meanwhile there has been an advance in the standard of living among the upper classes, altogether disproportionate to the advance in the laborer's wages, thus widening the gulf between employer and employed.

But whether the wages of the laborer have positively risen or not, and whether his present condition be better or worse than it was twenty or thirty years ago, the fact remains that the condition of the laboring classes taken generally — that is,

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average weekly wages of the ordinary farm laborer vary from 10*s.* 6*d.* in the mid-southern and southwestern districts, including Cornwall, Devon, Somerset, and Dorset, which are the worst paid counties, to 14*s.* 6*d.* in the northeastern district of England, which includes Northumberland, Durham, and Yorkshire, the best paid counties. These figures do not include the higher grade of laborers, such as bailiffs, managers, engineers, and other special workmen, but they cover the wages of shepherds, horsekeepers, and herdsmen, as well as all descriptions of field men required on the farm, and who receive a weekly or daily pay. The mean weekly money wages of able-bodied men, not employed at piecework, throughout the whole of England, closely approximates 12*s.* 6*d.*"

The following extract from a letter in the *Pall Mall Gazette* of January 22, 1869, indicates that the minimum wages of the hind is in some districts lower than supposed by Mr. Denton: "The clergy of many counties could tell of the constant struggles of their poor parishioners to keep body and soul together. Take the case of Herefordshire, for example, and especially the western side of the county. There the farm laborer's ordinary wages are 9*s.* a week; his ordinary home is two small rooms, through the thatched roof of which the rain drops on to a floor half mud and half broken stones; his daily food, dry bread and rough cider; his normal condition one of ignorance and squalor. Much of this may doubtless be attributed to general causes, which operate more or less strongly in all purely agricultural districts. But in Herefordshire much is also due to its system of farm-letting, and the extent to which game-preserving is carried."

* The following sentence is from an article entitled "Remarks on the Physique of the Rural Population," by the distinguished historian, the Rev. Charles Merivale, in the *Contemporary Review* for February, 1869: "The ordinary wages of the laborer are still regulated precisely by the price of corn; and, as it seems to me, have not risen either positively or relatively." And again: "I cannot say that during the twenty years over which my observation extends there has been any sensible improvement in the food of the poor agricultural laborer in my district." Evidence similar in its character abounds.

the condition of a majority of the population of England — is to the last degree deplorable. The wages are insufficient to support the laborers as a class and their families in health and comfort, to promote the formation of habits upon which moral progress depends, to encourage independence, or to afford them a ground of hope for the improvement of their condition, without demanding of them efforts far beyond the average capacity of human nature.

It is difficult for those who have never known the pangs, the weariness, the moral enervation, and the intellectual dulness, consequent upon the pressure of continued want, to enter in imagination into the real life of the poor. But if it be difficult for those who are rich or well off, the cultivated and intelligent, so to realize the wretchedness of those upon whose ill-requited daily toil the very prosperity of the upper classes depends, as not merely to feel their responsibility and their duty toward the poor, but to recognize the dangers to themselves and to the state which the present condition of society implies, how much more difficult is it for the poor themselves to feel the force of those moral considerations which are constantly urged, and too often urged in a spirit of mere selfishness, by regard to which they might achieve some improvement of their condition? With what face can we urge economy and thrift upon a man bringing up a family on from ten to twenty shillings a week? How can it be hoped to check population by preaching continence to those whose habitations render the preservation of modest habits an impossibility? How can it be hoped to stay intemperance, when the cheap indulgence which stimulates the vacant mind or deadens the dull sense of weariness is the solitary outlet from the habitual cheerlessness of forlorn days? A low physical condition induces a low moral condition, and restraints which avail with those who are well off have no power over the very poor.

When one writes or speaks in this way in England, and points out the progressive danger to society arising from the condition of the mass of the population being such that neither physical nor moral health can exist among it, he is frequently met with the assertions that there is a great deal of exaggeration concerning the wretchedness of the poor, and that measures for

their improvement are now in progress, which will be sufficient before very long to bring about a remedy for confessed evils.

Against the charge of exaggeration, testimony may be adduced which is not likely to be questioned. Fifteen years ago the eminent surgeon, Mr. John Simon, now the Medical Officer of the Privy Council, and at that time the Officer of Health to the city, wrote as follows in the preface to a volume in which were republished his reports relating to the sanitary condition of London.* Mr. Simon's character, wide experience, and long, useful services in the cause of sanitary improvement, give the highest authority and weight to his words.

"This national prevalence of sanitary neglect is a very grievous fact; and although I pretend to no official concern in anything beyond the city boundaries, I cannot forego the present opportunity of saying a few words to bespeak for it the reader's attention. I would beg any educated person to consider what are the conditions in which alone animal life can thrive; to learn, by personal inspection, how far these conditions are realized for the masses of our population, and to form for himself a conscientious judgment as to the need for great, if even almost revolutionary, reforms. Let any such person devote an hour to visiting some very poor neighborhood in the metropolis, or in almost any of our large towns. Let him breathe its air, taste its water, eat its bread. Let him think of human life struggling there for years. Let him fancy what it would be to himself to live there, in that beastly degradation of stink, fed with such bread, drinking such water. Let him enter some house there at hazard, and, heeding where he treads, follow the guidance of his outraged nose to the yard (if there be one), or the cellar. Let him talk to the inmates; let him hear what is thought of the bone-boiler next door, or the slaughter-house behind; what of the sewer-grating before the door, what of the Irish basket-makers upstairs, twelve in a room, who came in after the hopping and got fever; what of the artisan's dead body, stretched on his widow's one bed, beside her living children.

"Let him, if he have a heart for the duties of manhood and patriotism, gravely reflect whether such sickening evils as an hour's inquiry will have shown him ought to be the habit of our laboring population; whether the legislature, which his voice helps to constitute, is doing all that might be done to palliate these wrongs; whether it be not a jarring discord in the civilization we boast, a worse than pagan savage-

* Sanitary Condition of the City of London, 1848–1853. London: John W. Parker & Son. 1854. 8vo. pp. xl., 312.

ness in the Christianity we profess, that such things continue in the midst of us scandalously neglected, and that the interests of human life, except against wilful violence, are almost uncared for by the law.

"And let not the inquirer too easily admit what will be urged by less earnest persons as their pretext for inaction, — that such evils are inalienable from poverty. Let him, in visiting those homes of our laboring population, inquire into the actual rent paid for them, dog-holes as they are; and, studying the financial experience of model dormitories and model lodgings, let him reckon what that rent can purchase. He will soon have misgivings as to dirt being cheap in the market, and cleanliness unattainably expensive.

"Yet what if it be so? Shift the title of the grievance, is the fact less insufferable? If there be citizens so destitute that they can afford to live only where they must straightway die, renting the twentieth straw heap in some lightless fever-bin, or squatting amid rotten soakage, or breathing from the cesspool and the sewer; so destitute that they can buy no water, that milk and bread must be impoverished to meet their means of purchase, that the drugs sold them for sickness must be rubbish or poison; surely no civilized community dare avert itself from the care of this abject orphanage. And, *ruat cœlum*, let the principle be followed whithersoever it may lead, that Christian society leaves none of its children helpless. If such and such conditions of food or dwelling are absolutely inconsistent with healthy life, what more final test of pauperism can there be, or what clearer right to public succor, than that the subject's pecuniary means fall short of providing him other conditions than those? It may be that competition has screwed down the rate of wages below what will purchase indispensable food and wholesome lodgement. Of this, as fact, I am no judge; but to its meaning, if fact, I can speak. All labor below that mark is masked pauperism. Whatever the employer saves is gained at the public expense. When, under such circumstances, the laborer or his wife or child spends an occasional month or two in the hospital, that some fever infection may work itself out, or that the impending loss of an eye or a limb may be averted by animal food;* or when he gets various aid from the Board of Guardians, in all sorts of preventable illness, and eventually for the expenses of interment; it is the public that, too late for the man's health or independence, pays the arrears of wage which should have hindered this suffering and sorrow.

* Twenty years' daily experience of hospital surgery enables me to say, from personal knowledge, that our wards and out-patient rooms are never free from painful illustrations of the effects of insufficient nutrition; cases, in fact, of chronic-starvation disease among the poor; such disease as Magendie imitated in his celebrated experiments, by feeding animals on an exclusively non-azotized diet.

"Probably on no point of political economy is there more general concurrence of opinion than against any legislative interference with the price of labor. But I would venture to submit, for the consideration of abler judges than myself, that before wages can be safely left to find their own level in the struggles of an unrestricted competition, the law should be rendered absolute and available in safeguards for the ignorant poor, — first, against those deteriorations of staple food which enable the retailer to disguise starvation to his customers by apparent cheapenings of bulk; secondly, against those conditions of lodgement which are inconsistent with decency and health.

"But if I have addressed myself to this objection, partly because, to the very limited extent in which it starts from a true premise, it deserves reply; and partly because I wish emphatically to declare my conviction that such evils as I denounce are not the more to be tolerated for their rising in unwilling pauperism rather than in willing filth; yet I doubt whether poverty be so important an element in the case as some people imagine. And although I have referred especially to a poor neighborhood, — because here it is that knowledge and personal refinement will have least power to compensate for the insufficiencies of public law, — yet I have no hesitation in saying that sanitary mismanagement spreads very appreciable evils high in the middle ranks of society; and from some of the consequences, so far as I am aware, no station can call itself exempt.

"The fact is, as I have said, that, except against wilful violence, life is practically very little cared for by the law. Fragments of legislation there are, indeed, in all directions; enough to establish precedents; enough to testify some half-conscious possession of a principle; but, for usefulness, little beyond this. The statutes tell that now and then there has reached to high places the wail of physical suffering. They tell that our law-makers, to the tether of a very scanty knowledge, have, not unwillingly, moved to the redress of some clamorous wrong. But, tested by any scientific standard of what should be the completeness of sanitary legislation, or tested by any personal endeavor to procure the legal correction of gross and glaring evils, their insufficiencies, I do not hesitate to say, constitute a national scandal, and perhaps, in respect to their consequences, something not far removed from a national sin."

The condition of society here depicted could not be set forth in stronger or clearer words. But, it is said, great improvements in sanitary matters have been made, many of them due to Mr. Simon's own efforts during the last fifteen years, and the state of things exhibited in the preceding passage has

been greatly modified for the better. Doubtless it is true that in late years many local improvements have been carried out, many needed reforms commenced, the public sense has been aroused, as never before, to the need of exertion in behalf of the poor, legislative action has seconded individual effort, and private charity has lavished stores of wealth in the attempt to dam the swelling current of misery. But all these efforts have been ineffectual to prevent the growth of the evils against which they were directed. Not yet even has the intelligent part of the community risen to the sense of the need of what Mr. Simon justly called "almost revolutionary reforms." Prejudices of various sorts, religious bigotry, the selfish lust of gain, careless of the well-being of mankind, the improvident waste of money spent in demoralizing subsidies to the poor, and many other influences, have contributed to prevent any considerable improvement in the general condition of the laboring classes, either in the cities or in the country. What has been done is but a trifle to what was required; and even that trifle has failed of its full effect. The tide of poverty has successively swept down and over the puny banks erected to resist its encroachments. The condition of the laboring classes in the country at large has not materially improved during the last few years, and the numerical mass of wretched poor has increased.

In Mr. Simon's Report as Medical Officer of the Privy Council for the year 1863, some account is given of the results of a systematic and continuous inquiry, which had been in progress for five years, into the circumstances which regulate the distribution of disease in England. One of the most important portions of this inquiry related to conditions of nourishment, and in particular to the food of the poorer laboring classes.

"As the inquiry," writes Mr. Simon, "specially related to the feeding of our lowest-paid laboring classes, it was to be expected that evidence of very poor diet would often be met with; and such proved to be the fact. Throughout some of the examined classes, and in appreciable sections of the remainder, the diet was, to say the best of it, of doubtful permanent sufficiency for health. For the examined agricultural populations the diet was not so poor as for the examined in-door operatives. For both classes, of course, poverty was found to tell least upon those

who were without families. And in both classes, but very especially among the agriculturalists, insufficiency of food does not nearly so much affect the married laborer as it affects his wife and children. For he, in order to do his work, must eat; particularly if the agricultural laborer be fed at his employer's house; and most of all if he, being unmarried, lives there, he will commonly fare well. Even sometimes he will feed to excess. But, at least, the wives and children of the examined agricultural populations, and doubtless, to some extent, even the laborers themselves, are in some counties miserably fed. The worst deficiencies, however, were found among the examined classes of in-door operatives. They, taken as a whole, are so ill fed that assuredly among them there must be many instances of severe and injurious privation. . . . .

"Yet in this point of view there is, in my opinion, a very important sanitary context to be added. It must be remembered that privation of food is very reluctantly borne; and that, as a rule, great poorness of diet will only come when other privations have preceded it. Long before insufficiency of diet is a matter of hygienic concern, long before the physiologist would think of counting the grains of nitrogen and carbon which intervene between life and starvation, the household will have been utterly destitute of material comfort; clothing and fuel will have been even scantier than food; against inclemencies of weather there will have been no adequate protection, dwelling-space will have been stinted to the degree in which over-crowding produces or increases disease; of household utensils and furniture there will have been scarcely any; even cleanliness will have been found costly or difficult, and if there still be self-respectful endeavors to maintain it, every such endeavor will represent additional pangs of hunger. The home, too, will be where shelter can be cheapest bought; in quarters where commonly there is least fruit of sanitary supervision, least drainage, least scavenging, least suppression of public nuisances, least, or worst, water supply, and, if in town, least light and air. Such are the sanitary dangers to which poverty is almost certainly exposed when it is poverty enough to imply scantiness of food. And while the sum of these is of terrible magnitude against life, the mere scantiness of food is in itself of very serious moment. From such degrees of it as Dr. Smith found existing among the lowest-fed of the examined classes, there must, I feel assured, be much direct causation of ill-health, and the associated causes of disease must be greatly strengthened by it in their hurtfulness. These are painful reflections, especially when it is remembered that the poverty to which they advert is not the deserved poverty of idleness. In all cases it is the poverty of working populations. Indeed, as regards the in-door operatives the work which obtains the scanty pittance

of food is, for the most part, excessively prolonged. Yet evidently it is only in a qualified sense that the work can be deemed self-supporting. All disease of such populations, and whatever destitution results from it, must be treated at the public expense and on a very large scale; the nominal self-support can be only a circuit, longer or shorter, to pauperism."

In regard to the insufficient nourishment of a part of the class of agricultural laborers, important evidence is to be found in the Report of the Commissioners on the Employment of Children, Young Persons, and Women in Agriculture, issued at the close of last year, 1868.

"It is very commonly noticed," say the Commissioners, "that ill-paid labor is the least profitable, from the defect of physical power which is its common accompaniment. The same result is found to be produced by a bad dietary, although the wages may be (nominally) high, as in South Northumberland, where the old nourishing diet of the North has in late years been abandoned, in consequence of which 'it takes three men now to do the work of two.' Mr. Culley (one of the Assistant Commissioners) also quotes excellent authority for the fact that the ill-fed laborers of the South (of England) are inferior to those of the North in the same proportion as mentioned above, namely, as three to two." — p. xxxi.

Mr. Blackburn, who has farmed largely in Scotland and England, says: —

"Two Scotchmen will at any description of work equal three English laborers, owing partly to their superior physique, partly to the higher order of intelligence they bring to bear on their work." — App. I. p. 158.

It is a safe inference that the higher order of intelligence is likely to be associated with the superior physique, and that the superior physique depends on sufficiency of nourishment.*

When Burke wrote his "Thoughts on Scarcity," in 1795, he said: "It is the interest of the farmer that his work should be done with effect and celerity, and that cannot be done unless

* "The physical condition of the people," says the Rev. Charles Merivale, in his already cited paper in the *Contemporary Review*, "seems to me to be slowly and gradually, but still to some extent, deteriorating." "I am constrained to say that my own personal observation of the vital forces of our rural population is very disheartening."

the laborer is well fed, and otherwise found with such necessaries of animal life, according to his habits, as may keep the body in full force, and the mind gay and cheerful." If gayety and cheerfulness could be supposed in Burke's time to be the occasional moods of the tiller of the soil, at present there can be no such notion. Cheerful toil has vanished from England; there is much patient industry, but the laborer cannot be gay; his life in country or in town is a cheerless and struggling existence.

With wages insufficient, in view of the other demands upon them, to supply himself and his family with the food requisite for health, it is not to be wondered at that the home of the common laborer is often an abode utterly unfit for human habitation. The magnitude of the evil of overcrowding in cities is acknowledged, and efforts in some degree successful have been made to check it; but, year by year, acre after acre of houses destitute of every proper attribute of healthy and comfortable homes is added to the area of the great centres of commerce and trade. Such square miles of squalid and degrading habitations as are now extending in the east of London never defiled the face of the earth before. The district is a disgrace to human nature itself.

In 1864 Dr. Hunter was employed, under authority of the Privy Council, to make an inquiry into the housing of the poorer population in towns. His inquiry extended to some fifty of the chief centres of population. His report gives a picture of misery on such a scale as happily is not to be found elsewhere in the world. "In parts of London and some of the towns," says Dr. Hunter, "the state of the tenements is sickening, the state of the people most pitiable." "It is not too much to say that life in parts of London and Newcastle is infernal." *

"There are about twenty colonies in London of about ten thousand persons each, whose miserable condition," Dr. Hunter declares, exceeds almost anything he has seen elsewhere in England, "and is almost entirely the result of their bad house accommodation; and the crowded and dilapidated con-

* Eighth Report of the Medical Officer of the Privy Council. 1865. Appendix No. 2. *On the Housing of the Poor in Towns*, p. 62.

dition of these houses is much worse than was the case twenty years ago." *

In different towns the degree and extent of the wretchedness of the habitations of the poor differ widely, but the reader of Dr. Hunter's report can hardly fail to agree with Mr. Simon's comment upon it, that, "speaking generally, it may be said that the evils [resulting from overcrowding, and from the use of dwellings which are permanently unfit for human habitation] are uncontrolled in England." †

The same language may in general be applied to the condition of the homes of the rural poor as to those of the urban poor.

An important paper by Dr. Hunter, on the house accommodation of rural laborers in the different parts of England, forms a portion of the Seventh Report of the Medical Officer of the Privy Council, 1864.

"To the insufficient quantity and miserable quality," says Mr. Simon, "of the house accommodation generally had by our agricultural laborers almost every page of Dr. Hunter's report bears testimony. And gradually, for many years past, the state of the laborer in these respects has been deteriorating, house-room being now greatly more difficult for him to find, and when found, greatly less suitable to his needs, than perhaps for centuries has been the case. Especially within the last twenty or thirty years the evil has been in very rapid increase, and the household circumstances of the laborer are now in the highest degree deplorable."

Later evidence on this topic is to be found in the report already cited of the Commission on the employment of children and women in agriculture. In his report as Assistant

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* Id. p. 89.

† The effect upon the health of the poorer inhabitants of the great cities, from the nature of their food, the character of their dwellings, and the general want of proper sanitary arrangements, is strikingly exhibited in the Quarterly Return of the Registrar-General for the three months ending on the 31st of December, 1868. A selection of fourteen great cities and towns of the kingdom, peopled by 6,441,525 inhabitants, exhibits a rate of mortality equal to 2.615 per cent per annum, which exceeds the rate in the least unhealthy districts in England by one half. "Why," asks the Registrar-General, "should [industrious, prosperous, and wealthy communities see their people perish year after year at these appalling rates without trying some radical and effectual measures of reform?"

Commissioner, the Rev. James Fraser, whose good judgment and moderation give great weight to the conclusions which he draws from a careful and extensive investigation, makes the following statement: —

"It will be observed upon reference, not only to my Notes of Meetings, but to the special body of evidence upon this subject collected out of my returns, that nothing can be more wide-spread than the feeling entertained, nothing can be stronger than the language used, about the general condition of the cottages of the peasantry, certainly in every one of the agricultural districts, almost in every one of the parishes, which I have visited. In one return they are described as 'miserable,' in a second as 'deplorable,' in a third as 'detestable,' in a fourth as 'a disgrace to a Christian community.' Even where they are spoken of in favorable terms it will generally be found that if adequate in quality they are inadequate in quantity; and some rich landowner, 'lord of all he surveys,' and having exercised his lordship by evicting so much of his population as were an eyesore, or were likely to become a burden to him, — still employing their labor, but holding himself irresponsible for their domicile, — has, by a most imperfect system of compensation, built a limited number of ornamental roomy cottages, which he fills with his own immediate dependents. Out of the three hundred parishes which I visited, I can only remember two — Donnington, in Sussex, and Down Amney, in Gloucestershire — where the cottage provision appeared to be both admirable in quality and sufficient in quantity; and I mention these cases with the greater pleasure, because in each the landowner, though not resident, is as willing to recognize, and as careful to discharge, his responsibilities as though he were.

"The majority of the cottages that exist in rural parishes are deficient in almost every requisite that should constitute a home for a Christian family in a civilized community. They are deficient in bedroom accommodation, very few having three chambers, and in some parishes the larger proportion only one; they are deficient in drainage and sanitary arrangements; they are imperfectly supplied with water; such conveniences as they have are often so situated as to become nuisances; they are full enough of draughts to generate any amount of rheumatism, and in many instances are lamentably dilapidated and out of repair. . . . .

"It is impossible to exaggerate the ill effects of such a state of things in every aspect, — physical, social, economical, moral, intellectual. Physically, a ruinous, ill-drained cottage, 'cribbed, cabined, confined,' and over-crowded, generates any amount of disease, — fevers of every

type, catarrh, rheumatism, — as well as intensifies to the utmost that tendency to scrofula and phthisis which, from their frequent intermarriages and their low diet, abounds so largely among the poor. Socially, nothing can be more wretched than the condition of 'open' parishes like Docking, in Norfolk, and South Cerney, in Gloucestershire, in which have been poured remorselessly the scum and offscour of their 'close' neighbors. Economically, the imperfect distribution of cottages deprives the farmer of a large proportion of his effective labor-power. The employer who has no cottages to offer those whom he employs must either attract laborers by the offer of higher wages, or must content himself with refuse; and, in either case, when he gets his man, gets him more or less enfeebled by the distance he has had to travel to his work. The moral consequences are fearful to contemplate. 'I only wonder,' writes one clergyman to me, 'that our agricultural poor are as moral as they are.' Modesty must be an unknown virtue, decency an unimaginable thing, where, in one small chamber, with the beds lying as thickly as they can be packed, father, mother, young men, lads, grown and growing-up girls — two, and sometimes three generations — are herded promiscuously; where every operation of the toilet and of nature — dressings, undressings, births, deaths — is performed by each within the sight and hearing of all; where children of both sexes, to as high an age as twelve or fourteen, or even more, occupy the same bed; where the whole air is sensual, and human nature is degraded into something below the level of the swine. It is a hideous picture, and the picture is drawn from life. Mr. Clarke, of Norwich, can tell any one who will ask him tales of things he has himself seen, horrifying enough to make the very hair stand on end. The medical gentleman whose evidence I publish, assured me that cases of incest are anything but uncommon. We complain of the anti-nuptial unchastity of our women, of the loose talk and conduct of the girls who work in the fields, of the light way in which maidens part with their honor, and how seldom a parent's or a brother's blood boils with shame; *here*, in cottage herding, is the sufficient account and history of it all." — pp. 35, 36.

Evidence in regard to the habitations of the laboring poor in other portions of England, to a similar effect to that contained in this passage from Mr. Fraser's report, is to be found in the reports of the other Assistant Commissioners in the same volume; and a multitude of corroborative statements might be gathered from various sources. No one who has had an opportunity of personal observation can question the wide ex-

tent of suffering among the laboring classes from the wretched character of their dwellings. In the purely agricultural, in the mining, in the manufacturing districts, the evils arising from bad and insufficient house accommodation exist under various modifications, but everywhere to a shocking degree. And everywhere these evils are of a combined physical and moral nature, productive at once of ill health, ignorance, and vice.

The condition of education among the rural poor, and among other great bodies of English laborers, is what might be expected from the circumstances under which they live. The evidence collected by the Commission, whose report has been cited, shows that there are very few agricultural districts in which the children attend school after the age of twelve, and that usually by the time a boy is ten years old he is put to work, that his petty earnings may add something to the narrow resources of the household. Before he is twenty, in many instances, he has forgotten all of his little schooling. The poor themselves do not seem to be indifferent generally to the advantages of education, but the pressure of poverty is such that they cannot resist its compulsion, and against their will they are forced to submit to their children's growing up in ignorance.

"The agricultural laborer's wages," says Mr. Fraser, "are never up to the mark that can allow of his sacrificing the earnings of his child to higher considerations." And yet Mr. Fraser himself gives some most striking and affecting instances of the strenuous efforts made by the very poor to protect their own independence and to secure the blessings of instruction for their children. It must be a hard heart that can hear the stories of these laborers, given in their own words, without being moved to sympathy with them, and respect for them, and without being led to question the worth of a social system which brings about such results as are here displayed.

Mr. Fraser gives the following report of the statement of Mrs. Mary Cole, of Ingoldisthorpe: —

"Husband a shepherd, earns twelve shillings a week. Has brought up fourteen children, eight girls and six boys. Never let a girl of hers go into the fields; has got them all out into service. Turned them out

into the world pretty early, at fourteen years of age or so. They began to go into little places, just for their victuals. They are now all in good places, and are the greatest comforts that children can be to parents. Her husband can read and write, but she cannot. Not having any learning herself, she knew the value of it, so determined her girls, at any rate, should have as much as she could give them. There was no school at Ingoldisthorpe then, so she sent them to Snettisham. She had four of them, all girls, at school at one time, and paid tenpence a week for them. They stayed till they were about thirteen. She was often blamed by her neighbors for not sending her girls into the fields, but her heart was high and she would not. She said to herself, 'We 'll see how it 'll turn out. It 's the ruination of the country girls going into the fields; they will make neither good wives nor good mothers; and what do they know of needlework? They get bold and wild, and independent of their parents. Why, there 's three of them joined together and took a house by themselves at Sedgeford, to be their own masters.' All her girls can read and write. When she was bringing up this family her husband only earned ten shillings a week, besides what he got at lambing time; her house-rent was three guineas, and she had not a mite of a garden. She had to work very hard herself, took in washing, but never went out into the fields. She is sure her family would have suffered for it if she had.

"Her boys have not had so much schooling as her girls, they had to go out to work so young. Three of them went out at six, and took one shilling a week. Her husband's master (this was a good many years ago) would have paid him off if he had not let them go to work. Her eldest son is now in Truman's brewery, in London; he has improved himself, and can write pretty well now. He wrote home to his parents to beg that his younger brothers might be kept at school, as he had found the good of a bit of learning. She has another son living in Herefordshire; he can neither read nor write, because he has been at work ever since he was six years old.

"The other two boys who are alive are poor scholars; they have been at night-school for two or three winters, but are too tired with their day's work when they get there to learn much.

"Her husband is a very sober man; brings home every threepence he earns, never drinks, and the quietest creature as ever was on the face of the earth.

"A good school is the greatest blessing as can be in a parish. Only wanted her children to read and write and do plain needlework; did not care about nonsensical learning. Never knew anything nonsensical taught at Ingoldisthorpe school.

"Sees many of her neighbors take no thought about their children's learning. Thinks it a great pity. Suppose they could afford to send their children to school as well as she could, if they had a mind. Never grumbled about what she had to pay. They were happy days when she used to hear their innocent prattle when they used to come home from school. Remembers the time when flour was 3*s.* 6*d.* a stone, and she had nine children at home, and nothing coming in but her husband's wages, which were then 'heined' (raised) to twelve shillings a week. They were hard times, surely, but by the blessing of God she struggled through, and never had a penny from the parish."

Such a story as this is a tale of endurance and effort that may be justly called heroic. If a corresponding spirit of sacrifice, and an equal sense of duty, could be roused among the rich, among those who are responsible for providing the means of education for the poor, the condition of England would very soon be changed.

"It is a common charge, brought against farmers as a class," says Mr. Edward Stanhope, in his report as Assistant Commissioner on the Employment of Women and Children in Agriculture, "that they care little for education, and are rather disposed to discourage it. Now in many cases it cannot be denied that education is materially interfering with labor, because the object of the laboring class in seeking it is not to make their children better agricultural laborers, but to enable them to rise to a higher sphere in life. 'If I could only get him to be a scholar,' said one woman, 'he should never be a farm laborer.' 'If I were a scholar, I should n't be here,' said a laborer, 'and that 's the reason why the farmers hold against this 'ere scholarship.' One cannot therefore be surprised that farmers should wish so to direct education as to prevent its having this effect as far as possible. 'Their view is that more than a little is very much too much; they are afraid that laborers will be spoiled for field work.' Their object is to keep the school down."

Shortsighted as are such views as these, there is little doubt that they prevail extensively, not only among farmers, but among manufacturers also, and other employers of labor. It hardly needs to be urged that no permanent improvement can be expected in the condition of the laborer unless the means of education be secured to him. This is not all that is needed, but it is one of the most pressing of his wants. Without education he neither knows how to better himself, nor is supplied

with the faculties adequate to overcome the difficulties which surround him and hinder his progress.

"It requires," said the Times, in a recent article, "both more knowledge and more intelligence than he possesses to appreciate the possibilities of migration and emigration. He knows no other lot open to him than that in which he was born, and the horizon of the village is his world. It is the imperative duty of his betters to assist in raising him from this ignorance and helplessness. There could be no greater mistake than to think, as we fear some employers do, that the discharge of this duty would injure their own interests. Nothing is more for their interest than that the intelligence of the laborer should be increased. It is certainly for the interest of the whole country, and the country has the right, which it must sooner or later exercise, of insisting that the corresponding duty shall not be neglected." *

In a recent essay entitled "What can be done for the Agricultural Laborer?" Professor Fawcett says: "It is sometimes almost triumphantly said — I have heard it in the House of Commons — that the agricultural laborer is not so badly off as many who work in our large towns"; † and, indeed, it is quite true that a workman in London, or any other of the crowded cities, earning eighteen or twenty shillings a week, is hardly more prosperous than the laborer in the country with ten or twelve. Mr. Mechi, whose experience as a farmer, at Tiptree Hall, in Essex, is well known, writing to the Times, on the 26th of January of this year, concerning agricultural laborers, asserts that the condition of the laborer has improved of late years, and mentioning that the present rate of wages in his neighborhood is eleven and twelve shillings, he goes on to say: —

"I know of some cottages in this neighborhood where families of seven children have had only one small bedroom for the nine members of the family. Many cottages are in a dilapidated condition. . . . . Very few laborers over forty can read or write. . . . . Married couples with large young families are rather sorely pressed." But he adds: "I am inclined to think favorably of the condition of our country laborers as compared with those in towns and cities."

What then must the condition of the latter be?

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* The Times, February 16, 1869.

† *Macmillan's Magazine*, October, 1868.

It is from the laboring classes that the vast army of paupers is recruited. On any given day of the year there are about a million men, women, and children in receipt of public relief, and known as paupers. The numbers are a little less in summer than in winter, and in a year of prosperity than in a year of commercial depression. But for twenty years the army has never been composed of less than eight hundred thousand individuals, and has frequently risen to over a million.*

The returns furnished by the Poor Law Board do not afford the means of ascertaining the total number of persons who receive relief in the course of a year; they merely give the numbers of those in receipt of relief on certain days. It would doubtless be an under-estimate to compute the number of persons who are obliged to seek public relief at some period of the year at double that of the paupers on any given day. If we add to this number the number of those who are more or less dependent on private charity for a livelihood, and who probably amount to several hundred thousand, we are brought to the conclusion that England supports as paupers not less than one twentieth of her population, while much more than a tenth of her people stand so near the verge of pauperism as to be for a portion of every year dependent upon public or private charity. And, still further, though in the absence of exact statistics it is impossible to make a precise statement, it seems certain that not less than one quarter of the people of England are at some period of their lives dependent for subsistence upon public or private charity.

The returns of the Poor Law Board show that the money spent in public relief of the poor during the last twenty years has amounted upon an average to the annual sum of £5,831,000, or enough to keep over one hundred and twelve thousand men at work at a wage of one pound each per week. And this enormous outlay for the relief of suffering seems to have no effect in removing its causes. The complaint is common that pauperism is increasing, and though it does not appear that the number of persons in England more or less dependent upon public charity

* For a summary statement of the mean number of paupers in receipt of relief at one time in each year since 1849, see Twentieth Annual Report of the Poor Law Board, 1867 - 68, p. 11.

for support has increased out of proportion to the growth of the population, it is obvious from the returns that vast as is the sum expended in public and private charity it does nothing to diminish the sources of pauperism.

In a paper on the Charities of London, read at a meeting of the Association for the Prevention of Pauperism and Crime in the Metropolis, on the 17th of December, Dr. Hawksley stated, as the result of a careful investigation, that

"At least £7,000,000 a year are employed in dealing with the requirements of London poverty and pauperism. It results that if one eighth of the whole metropolitan population — that is, 400,000 persons — were entirely dependent on the other seven eighths, the sum named would supply to each £17 a head per annum for every man, woman, and child, or to every family of five persons, £85 per annum, and leave £50,000 to pay the expenses of collection and distribution. Notwithstanding this great expenditure, pauperism and crime are advancing far beyond the relative increase of population [in London]. During the last ten years, 1858–1868, the population of London has increased one sixth, but the pauper part of it has increased five tenths, or half."*

Another gentleman, Dr. Stallard, who has given great attention to the subject, estimates the sum spent annually in London for charitable purposes at over £8,500,000. "This sum is equal to 4*s.* 3*d.* per week, all the year round, for eight hundred thousand persons, and ought to be more than sufficient for the relief of every form of misery." †

Whether we accept the higher or the lower of these estimates as nearest the truth, each of them is alike evidence, not of effective and well-directed charity, but, in great part, of the misdirected, wasteful, and corrupting bounty of thoughtless humane impulses and sentiments, and of selfish efforts to purchase, by an expenditure of money, immunity from personal exertion, and personal sacrifice. Much of the money thus lavishly poured out in miscalled charity simply aggravates the

* "The Charities of London." By Thomas Hawksley, M. D. London: 1869, pp. 7.

† "Pauperism, Charity, and Poor Laws." By J. H. Stallard, M. B. London: 1869. 8vo. pp. 18. The Times published, February 11, 1869, an elaborate Synopsis of Reports of some Metropolitan Charities, which, so far as it extended, confirmed the estimates of Dr. Stallard.

evils which it is meant to relieve ; for while it tends to educate a predatory class of degraded professional paupers, it fails to assist the independent poor, struggling for existence, and tottering on the brink of pauperism, and its consequent degradation.

Very recently well-directed efforts have been made on the part of government for a better administration of the State charity, and on the part of individuals to secure a proper co-operation among the charitable institutions, and to give a proper direction to private benevolence. But no sufficient remedy for the evils of the present system of public and private almsgiving is to be found, short of an absolute reform in many of its most common methods, springing from a quickened sense among the prosperous of their responsibility toward the poor.

We have seen that millions of people in this country — one of the richest in the world — barely drag out existence upon a pittance insufficient to secure the food necessary for health, living in abodes unfit alike for the physical and moral needs of life, and unable, both from their own circumstances and from the indifference, to use no stronger word, of those whose dependants they are, to obtain such education as might invigorate their efforts for improvement.

No language can be too strong to characterize the disgrace and the danger to a civilized community of a state of society which thus perpetuates the misery of a great proportion of its members, which thus degrades humanity by condemning it to conditions which inevitably generate ignorance and vice, and are the fruitful sources of crime.

It cannot be too distinctly stated that the poorer classes have not the power at present to raise themselves from the degradation into which they have sunk ; that the material conditions of their life so deprive them of hope, of stimulus to exertion, and of vital energy, that they are in great measure free from responsibility as to the results of these conditions upon moral character.

It cannot be too well understood that the rich, the prosperous, and the powerful are directly responsible for the worst existing evils of society, and that they are bound not only by

general motives of humanity, but by special motives of self-interest, to exert themselves to a far greater degree than they seem now to have the thought of doing for their remedy and removal. Bound by special motives of self-interest, — for a society in which an overwhelming majority of its members have no reason to desire the stability of its institutions, but every reason to look forward to change, however violent and destructive in its nature, as likely to effect an improvement in their condition, is constantly exposed to the risk of revolution and entire reorganization. And even if this were not the case, the improvement of the condition of the working classes would still be a matter of most immediate self-interest to those who desire the continuance of their own material prosperity, because on the improvement of these classes, in conformity with the general progress in the world, depends the permanence of the wealth and power of England. If the poor are degenerating; if their physical vigor is diminishing; if larger numbers of them are falling into dependence upon public or private charity; if the motives to independence are becoming weaker, — then the decline of the state has set in, and the stream of wealth and prosperity is shrinking at its source.

But against such considerations as these it is urged: "If we be not doing all we might, we are doing much. Every year more attention is given to education; every year there is an extension of sanitary reforms; and if the condition of the poor is deplorable, it is due, not to the indifference and selfishness of the rich and the powerful, but in great measure to the operation of laws of political economy over which we have no control."

The laws of political economy which are often thus referred to are mainly those relating to the distribution of wealth, and especially those which are supposed to regulate wages by the principle of supply and demand as applied to labor.

On this topic especially a vast deal of sophistry is current. The laws of political economy are not sufficient by themselves to regulate the relations of men one to another. If they be properly understood and interpreted, they undoubtedly, so far as their jurisdiction extends, correspond with and confirm the dictates of that morality which finds its motive and sanction

in the happiness of mankind. But the variety of dispositions among men, and the complication of their interests, are so great, that the laws of political economy can rarely be absolutely applied, even when fully understood, to the direction of their concerns. The laws which are theoretically true concerning the accumulation and distribution of wealth are, in their practical application, continually subject to modification by the moral conditions of individuals and races. But even the true nature of these laws is frequently misunderstood, and the false interpretation of them may become one of the most serviceable instruments of oppression, and one of the most dangerous weapons of selfishness. A striking illustration of this fact is afforded by the prevalence of the doctrine that the sole economical consideration which is to determine the rate of wages at a given place and time is the demand for and supply of labor. Pushed to its consequences, this doctrine leads the employer of labor to take advantage of every circumstance which may promote an abundant supply of the kind of labor which he requires, without regard to the consequences of such a course to the health and happiness of the laborer. The tendency of such a doctrine, applied without restriction, in the present state of the world, is to the degradation of the laborer, and the destruction of his freedom, even to the point of actual or virtual enslavement. The question is often discussed as if, in the competition of the market, the employer and the laborer stood on equal terms, and had equal power in the determination of the rate of wages. But this is very seldom the case. As a rule, the employer has on his side two grounds of superiority to the laborer, — the possession of capital, and the possession of more cultivated intelligence. The first makes the employment of labor more or less a matter of choice with him ; the second enables him to vary his pursuits. But, in the actual condition of the laboring classes, the laborer has little or no choice in the matter of employment, and must take such as is offered him, and upon the terms on which it is offered, or must starve. The result is that, in a densely peopled country, employers of labor in the chief fields of industry — in all those which require of the workman no special intelligence — have the power to determine the rate of

wages; and, as long as the present narrow ideas of political economy prevail, custom will do little to prevent competition from producing its legitimate effect in the lowering of the standard of wages to a minimum. Mr. Mill, in his chapter on wages, says: "In this country there are few kinds of labor of which the remuneration would not be lower than it is if the employer took the full advantage of competition." But even if this be true, it is safe to assert that in many of the most important branches of industry the employer frequently takes advantage of competition to a degree which keeps the laborer in dependence, and even in want of the necessaries of healthy living. No one who investigates the relations of capital and labor can doubt that in the long run a disproportionate share of the profits of production falls to the capitalist,* and that the distribution of wealth consequently grows more and more unequal and unsatisfactory.

It is a truth too often forgotten that, in the present complex and unorganized condition of society, many of the laws of political economy, if applied without restriction to the regulation of human relations, work nothing but misery. In an ideal state of society, in which every man should be intelligent and independent, the rate of wages might perhaps be safely determined by competition. But in the actual condition of society, political economy itself teaches that reliance upon competition alone to fix the rate of wages may, and often, indeed, must, operate in violation of those superior laws of the science which determine the permanent prosperity of mankind, and regulate its advance. Competition at any given moment may establish a rate of wages which shall be destructive of the health and happiness of large sections of the community. In its turn it needs to be controlled in its operation by higher laws.

To remove the existing evils two great remedies have been proposed, each tending to a diminution of population, and consequently of competitors for labor. The first of these is emigration. But it is plain that this is a mere palliative. The

* For a striking illustration of this fact, see the very instructive evidence given before the Trades' Union Commission by Mr. James Nasmyth, the eminent machinist; especially questions 19,181 – 19,189, from the answers to which it appeared that Mr. Nasmyth had paid 21*s.* a week to a man whose work brought him in a profit of £6. — Tenth Report, 1868, p. 66.

fields for emigrants will in time, perhaps not long hence, be closed, while the increase of the population of the country from which the emigrants depart is likely to be quickened by the fact of their leaving a void to be filled. The second is, a limit self-imposed on the increase of families, a restraint upon the instinct of population. That this latter remedy, if it could be applied, would be effectual in the degree of its application is certain; but in the present low moral and intellectual state of the working classes, it seems very doubtful whether the motives to self-restraint can be made so effectual with them as to lead to any great results in this direction. Legal restraints upon marriage might effect something, but their operation must be very partial.

What, then, can be suggested as likely to lead to a more suitable rate of wages being established as the recompense for labor? There is no single panacea. But the ground upon which improvement must rest is that of education, — education of the rich as well as of the poor. The direct result of education in the case of the poor would be to make them masters of themselves, to open new fields of labor for them, and to develop in them those moral dispositions which would lead both to a restraint upon population, and to the formation of habits of economy and thrift. The education which the rich especially require is in its nature moral, — an education in social duties, and in that enlightened self-interest which sees its advantage, not in a selfish accumulation of wealth regardless of the claims of those who assist in its production, but in such a division of profits as should raise the general standard of comfort.

Under existing circumstances, there can be no object so important for the government of England as the promotion of education. It cannot be accomplished unless efforts in behalf of education be accompanied by the widest and most stringent measures of sanitary reform, which shall secure to the poor such habitations as are not detrimental to health, as are not inconsistent with a tolerable degree of physical comfort, and in which the preservation of moral purity is not impossible.

The most strenuous, unselfish, and foreseeing action is demanded for the preservation of what is good in the existing

social order, and for the remedy of evils which are now of such magnitude as to be standing menaces to the very life of the state. A very different spirit is required for dealing with these evils from that which is displayed in Parliament, or in public opinion as expressed by the majority of its leading organs. Unless the ruling classes, upon whom rests the responsibility for remedial effort, are aroused from their selfish inactivity to a new sense of duty and to new exertions, no prophet is needed to foretell the approaching overthrow of social order. Even now the question with all thoughtful men is whether the evils of the state have not reached a point beyond legal remedy. To many it already seems that only the red hands of violent revolution can tear down the barriers by which, in the midst of the highest refinements of civilization, great masses of the people are shut up in a close Jew's quarter of misery, ignorance, and degradation, and reduced to the moral level of savages. The forces of conservatism in England are enormous; they are banded together, in many instances, to maintain an unjust order of things, and to repress the healthy life of the community. But in proportion to their strength is the accumulation of the pent-up forces of destruction. A small minority of the population are in possession of the main instruments of compulsion, but in the long run the great majority must rule, — if in no other way, by the exhibition and use of the physical force of which acting in combination they are the masters.

The progress of democratic ideas in political affairs is gradually transferring the legislative power to the majority of the people. But the transference of this power is so slow, and the majority have become so brutalized, that the very process is full of danger. It is a great, though a very common mistake, to suppose that the mass of the laboring classes and of the poor in England are not discontented. They have learned to hide their thoughts; but they feel, and, to some degree, they know, that the existing social order is unjust to them, and their discontent, though smothered and ineffectual at present, might easily be wrought into a fury against which all the defences of actual institutions would be as vain as were the walls of the Bastile against the passions of the mob of the Faubourg St. Antoine.

CHARLES ELIOT NORTON.

ART. V. — 1. *An Elementary Treatise on American Grape Culture and Wine-making.* By PETER B. MEAD. New York: Harper and Brothers. 1867. pp. iv., 483.

2. *Vineyard Culture Improved and Cheapened.* By A. DU BREUIL. Translated by E. and C. PARKER. With Notes and Adaptations to American Culture, by JOHN A. WARDER. Cincinnati, Ohio: Robert Clarke & Co. 1867. pp. x., 337.

3. *The Grape-Vine.* By FREDERICK MOHR. Translated by CHARLES SIEDHOF. New York: Orange Judd & Co. 1867. pp. vii., 129.

4. *The Wine-maker's Manual.* By CHARLES REEMELIN. Cincinnati, Ohio: Robert Clarke & Co. 1868. pp. viii., 123.

5. *Address of* DR. C. W. GRANT, *delivered before the Grape-Growers' Convention at Canandaigua, N. Y., October* 20, 1868. [Proof-sheets.]

6. *The Cultivation of the Native Grape and the Manufacture of American Wine.* By GEORGE HUSMANN, of Herman, Missouri. New York: Woodward & Co. 1868. pp. xi., 192.

7. *The Culture of the Grape.* By W. C. STRONG. Boston: J. E. Tilton & Co. 1867. pp. xvi., 355.

IN April, 1865, we gave in this Review a brief sketch of the rise, progress, and condition of open-air grape culture in the United States, and added thereto some safe prophecies of its probable future, and some hints upon the management of the vine, derived in large measure from our own experience.

Since that time grape culture has made great progress in almost every State in the Union; new varieties have been introduced and tested; new wines have been brought into notice; and, in short, so marked an advance has been made in every department of viticulture as to justify us in again calling the attention of our readers to this important subject. So important and complex a subject is it, that we cannot treat it exhaustively within the limits of an article, but must be general in our statements, referring our readers for statistics to government and State reports, and for details and practical methods to the able manuals named above.

At the risk of a little repetition, we propose now to say a few

words in regard to the past history of grape culture in this country, and then to speak of its present condition, with particular reference to the newer varieties of grapes and the brilliant prospect now opened in wine-making in the United States. Wine was made from native grapes by the early settlers of Florida in 1564. The London Company in Virginia, excited doubtless by the abundance and vigor of the indigenous vines, attempted to establish a vineyard in 1620, imported French *vignerons* in 1630, had certainly succeeded in making wine in 1647, and offered premiums for its manufacture in 1651. William Penn in 1683, Andrew Doré in 1685, and Peter Legaux in 1793 made unsuccessful attempts to establish vineyards. In 1722, Virginia had vineyards that gave abundant returns with little care, but for many years no grape appeared good enough in all respects to put grape culture and wine-making on a firm basis. The Catawba grape, discovered in 1801, brought to public notice in 1816, and introduced at the West with so much success, is the variety whose appearance at a critical time entirely changed the aspect of grape culture in this country. To this variety and to the Isabella, although their day of triumph is now past and gone, we owe a debt of gratitude that should not be forgotten. As a market grape, and as a grape for wine, the Catawba for many years had no rival. Now it succeeds only in favored spots, and is too subject to the attacks of disease to be trusted as in former days. The Isabella, though widely cultivated, was never a rival of the Catawba, and has always been considered inferior to it.

We may remark here, in passing, that all the persistent and expensive attempts that have been made to cultivate the European grape, the *vitis vinifera*, in the open air, have proved failures in the Northern and Middle States. The season here is long enough to ripen many foreign kinds, but the violent atmospheric changes and sudden variations of temperature to which we are subject are very unfavorable to the growth of vines whose leaves are naturally susceptible to the attacks of mildew. Now and then in a city a foreign vine, trained against a brick wall, may be made to ripen its fruit, but the exceptions to the general rule are few.

Local varieties arose and fell, but up to a comparatively

recent date the Delaware and Diana grapes, with perhaps the Concord, were the only kinds that bade fair to supplant the two well-established kinds for cultivation on a large scale.

The Delaware grape, which we described three years ago as then *facile princeps* among American varieties, and of whose native origin there can be no doubt, has been planted largely of late, and the extraordinary merits of its fruit, both for table use and for still and sparkling wine, have been fully admitted. Yet the tendency of the Delaware to mildew in some localities, and its habit of dropping its leaves early in the season, together with its slow growth, prevent many *vignerons* from setting out so many vines of this variety as they would plant if they could trust it more implicitly.

The Diana is a seedling from the Catawba, and possesses shining merits of its own, with some radical defects, transmitted from its parent. It is better than the Catawba; its clusters are noted for keeping well in the winter, and their juice mingled with that of the Delaware makes a superb wine; but the vine itself is somewhat tender, and requires a peculiar soil and treatment. Still, in spite of its inherent faults, more and more vines of the Diana are planted every year.

From Maine to Florida, and from the Connecticut Valley to the banks of the Mississippi, the Concord grape flourishes and bears fruit. Judged by a standard at all critical, its fruit, and its wine particularly, are of the second or third class; but its hardiness, its immense productiveness, and the certainty with which it ripens its crops in ordinary seasons, added to its wonderful freedom from disease, have given it a hold on public confidence which cannot easily be shaken. To an uncritical taste its faults are of no moment compared with its excellences, but tried by a severe standard it can never hold a very high rank.

The number of new grapes introduced during the past ten years is enormous. The facility with which new varieties may be called into being, the fascination attending the production of new kinds, and the certainty of profit if a kind be obtained better than any before known, all conspire to give the grape-growing public a flood of new grapes, nine tenths of which are forgotten as soon as they are named. One in a thousand, per-

haps, has qualities which put it by right in the front rank, and give it a place among established kinds.

Of the newer grapes that have been pretty well treated, the Adirondack, Israella, and Iona are among the foremost, although of very unequal merit.

The Adirondack is supposed to be a seedling from the Isabella, and was found growing wild in Northern New York. It is a sweet, tender, pleasant grape, valuable rather for its earliness and absence of defects than for any positive merits. The vine is a moderate grower, and unfortunately is a little tender. We do not believe it will ever be widely planted.

The Israella, which originated with Dr. C. W. Grant, is also a seedling from the Isabella, but of more decided merit than the Adirondack. The vine is vigorous, productive, and generally healthy, although subject to mildew in some places. The clusters are large, compact, and ripen early. The berries are purple, sweet, of excellent flavor, and cling well to the stems. In fact they are sometimes so closely set as to make the cluster almost solid. It is without question the best grape of the Isabella family yet produced in this country.

When the Delaware had been pretty widely disseminated, and its merits had become known, it was found so superior to existing kinds as to make cultivators confident that it would be a long time before a variety of equal rank would be obtained. No one expected that we were soon to see a grape at once larger and better than the Delaware. But about the year 1867 the patient waiting and well-directed experiments of Dr. Grant, of Iona Island, were rewarded by the appearance of the Iona, the crowning glory of viticulture in this country, and a grape destined not only to give us more correct notions of excellence in grapes, but to compel the respect and admiration of foreign wine-makers. For beauty, delicacy, richness of flavor, freedom from the tough pulp that surrounds the seeds of almost all American grapes, and for the qualities that constitute a true wine grape, the Iona, in our opinion, stands without a rival. Its adaptability to various soils and conditions of growth needs more thorough testing, but our experience with it during the last, most trying season leads us to hope that it may ripen with tolerable certainty even in Massachusetts.

We turn aside for a moment to remark that this country owes more to the originator of the Iona than it can ever repay. By precept and example Dr. Grant awakened the public mind to the importance of grape culture and the necessity of having better grapes than those formerly set up as standards. He proved that it is almost as easy to raise the best grapes as the poorest, and, by producing new and better kinds, he put the means of improvement within the reach of all. His labors have wrought a silent but prodigious revolution in grape culture in the United States.

Mr. E. W. Bull of Concord, Massachusetts, did not rest upon his laurels when he had produced and sent forth the Concord grape, but by patient experiments, conducted year after year with unwearied enthusiasm, he has created several new varieties, seedlings from the Concord, that cannot fail to make their mark. From the tough, inedible native Mr. Bull has produced grapes of great delicacy and refinement, free from fibrous pulp, exceedingly hardy and vigorous, and one of them at least possessing very remarkable properties for wine-making. Two of these, the Cottage and the Una, a purple and an amber-colored grape, have been made public property, and have no doubt a most useful future before them. The Martha, a grape of much promise, is also a seedling from the Concord.

We have left ourselves but little space to speak of other varieties. For sheltered locations and warm, rich soils, the Allen's Hybrid and the Rebecca still hold a high rank among light-colored grapes.

The Clinton, a small purple grape, is sometimes raised for wine, but has no merits as a table fruit. The vine is an enormous grower and bearer, and is very hardy.

The Hartford Prolific is still raised on account of its earliness. It has no other merits, and its defects are glaring. There will be no excuse for cultivating a vine like this, removed but one step from the native, when the Israella and Mr. Bull's seedlings become better known.

Four years ago, in this Review and elsewhere, we earnestly maintained that the numerous varieties raised and introduced by Mr. E. S. Rogers of Salem were genuine hybrids, and that their hybridism was established by facts and reasoning that

could not be refuted. This doctrine was very unpopular with many growers at that time, but we have seen them since come over to our side one by one, until we think that very few doubt that Mr. Rogers has produced grapes which are the result of crossing our native varieties with the *vitis vinifera* of Europe. Within a few years the so-called Rogers hybrids have been spread through the country, and some of them have acquired an enviable reputation. Probably the final verdict will be that the three or four best kinds should be preserved and cultivated, and that the less valuable numbers should be thrown aside. The best, and one already planted largely for wine, is the Salem, a noble grape, showing evident marks of both its foreign and native parentage, and with us this last year enduring the unfavorable changes of weather as well as any other out-door vine. Messrs. Underhill of Croton Point, and Moore of Rochester, N. Y., have each produced hybrid grapes, of which we are compelled to say that they seem almost too good. We mean by this that we fear they contain so large an amount of the foreign element in their composition as to make their success in our climate a matter of doubt. One of them at least, the Diana-Hamburg, a magnificent grape *per se*, is wholly unfit for this part of the country, losing in our garden every leaf by mildew before midsummer.

We used to think that the path to sure and immediate success in the production of new varieties of permanent value lay through hybridizing the native and the foreign grape; but theoretical objections, as well as the great triumphs of experimenters like Mr. Bull and Dr. Grant, who have worked in a wholly different way, have led us to doubt the soundness of our former belief. The objection *a priori* to hybridizing is the strong probability that the hybrids produced will not only derive from their foreign parents those properties of flavor, richness, and size which make the fruit of the *vitis vinifera* so attractive, but also inherit a constitution which can never resist mildew and rot, and make headway against the sudden and violent atmospheric changes to which our climate is subject. The better the hybrid is, — that is, the more nearly it resembles its foreign parent, — the more likely is it to have a tender constitution, unfitting it for our vineyards.

On the other hand, by direct breeding, or, in other words, by planting a vast number of seeds of some good grape, allowing the resulting seedlings to bear fruit, selecting the one in a thousand that gives signs of superior quality and shows no loss of vigor, planting its seeds, and so continuing, grapes have been obtained of the highest rank, and yet as hardy as their parents. The Concord, and, better still, the seedlings from it, are instructive instances of brilliant results obtained by direct breeding.

No one should infer from the praise we bestow upon certain excellent grapes that the end has been reached. We have not yet a perfect grape. No variety has been produced which has in the requisite degree the three prime qualities of hardiness, early ripening, and fruit of high character. We have many hardy grapes that are of poor quality, many excellent grapes that are tender, and many of the highest class that are both tender and tardy in ripening.

The production of new varieties of any fruit opens a tempting field for experiment, and the rarity of high success makes the prizes drawn all the more valuable. Whoever works by hybridizing, or by direct planting, procures for himself a fund of the purest enjoyment, and in some exceptional cases gains a large pecuniary reward. The man who shall create a grape as hardy as the Concord, ripening in Massachusetts without fail before the 10th of September, and at the same time of the best quality when tried by the highest standard, will have added to the absolute wealth of the country an amount incalculable. Major Adlum, who introduced the Catawba grape, was fond of saying that he had done his country better service than if he had paid off the national debt, — no idle boast, if we consider what the Catawba grape has done directly, and to what indirect results it has led.

To sum up, then, all the varieties of grapes we can recommend for out-door cultivation in this region may be counted on the fingers. The Concord and one or two of its seedlings, the Israella, Diana, and Delaware in very many localities, possibly the Adirondack, the Iona wherever it can be made to ripen, and

two or three of the most thoroughly proved Rogers hybrids, comprise all we can advise a beginner to try.

The Rebecca and Allen's Hybrid among light-colored grapes, and the Creveling and Union Village among purple kinds, will succeed in favored places; but some of them are tender, and all are more or less subject to disease. The Isabella is almost discarded in New England. The Hartford Prolific, Clinton, and a number of all kinds hardly removed from the native grape, are not worth cultivating. Some will dissent from this opinion so far as it condemns the Hartford, but we feel sure that this kind must soon give way to varieties which are equally early and of greatly superior quality. The Dana and Nonantum grapes are two recent acquisitions of Massachusetts origin, but as yet are not well known. They give signs of being valuable kinds, and no pomologist has had greater success in producing new fruits than their originator, Mr. Francis Dana.

We do not know that any radical change of opinion in regard to soil and cultivation has taken place since we last discussed these subjects in this Review.

Success by a peculiar method or in a peculiar location too often blinds a vine-grower to the merits of a different system or a better soil. Hence there are almost as many methods and theories as there are *vignerons*. If any change has been wrought in grape-growing, we think it is in the matter of deep planting and high manuring. The school that taught us to trench the ground deep and stimulate the growth of the vine with strong manures has had its day, and more rational counsels prevail. The results of deep trenching and high manuring are so immediate and striking, that the beginner is often led astray, and repents when too late. Whoever plants a vineyard should remember that present success may be bought by failure at no distant day, and should consider too that in planting a vine he is working, not for a year or for ten years, but for centuries. More vines have been ruined, we believe, in this cold climate of ours by being planted too deep and by subsequent over-stimulation than by all other causes combined. Vines should not be planted deep, because the soil in our short summer rarely gets warmed more than a foot below

the surface; and they should not be overfed, because high manuring causes a rank growth of wood that ripens imperfectly and is as often winter-killed when protected in winter as when exposed.

Any moderately good soil, dry and not too rich, will give good crops of grapes, provided the location and aspect are favorable. The Delaware is perhaps the only variety that demands a deep, rich soil. In poor land it not only fails, but it can hardly be kept alive. On the other hand, we have Concord vines growing moderately well in the gravel of a dry side hill, where the white bean, the very pariah of vegetables, refuses to grow at all. The Rebecca does best in a clay soil of moderate richness; while the Diana needs a poor soil to check its rampant growth and enable it to ripen its wood. Enriching the soil will increase the size of the Concord grape, but at the same time the quality of the fruit will be impaired.

We have in mind as we write a vineyard of choice varieties, the owner of which made preparations for planting by trenching to the depth of two and a half feet, and enriching the soil with every conceivable fertilizer he could obtain. The result was immense growth of vine and enormous showy clusters for a few years, and then disease leading to a gradual failure both of vines and fruit.

It cannot be repeated too often, that the main object of the *vigneron* in our cold climate should be to get well-ripened, healthy wood that will stand the winter unprotected. No vine that is forced or over-stimulated can produce such wood, and this is why caution in the use of manures is necessary.

For established vines, the Delaware alone excepted, wood ashes and bonedust in moderate quantities are the strongest fertilizers we are disposed to employ. These contain all the inorganic food necessary for the growth of the grape, and do not stimulate the vine to excess. The insane policy of cutting off the upper tier of vine-roots, laid down in some foreign manuals as essential to success, has never been adopted here, and never will be. Any procedure that tempts the roots to go more than a foot below the surface is ill advised. The number of vines that should be grown upon an acre, and consequently the space that each vine shall cover, are still disputed points,

and the consideration of these leads directly to the questions of training and pruning.

After reading almost everything that has been published of late years on these topics, and after testing carefully numerous methods of training with a great many varieties, we have come to have certain fixed ideas with regard to the proper distance between vines and the closeness with which they should be pruned. We believe that great mistakes are made in crowding too many vines into a given space, in cramping the growth of each individual vine, and in pruning too close. We do not belong to what may be called in a double sense the natural school of *vignerons*, who advocate allowing grape-vines to straggle at will over the tops of trees; but at the same time we do not think that the extremely close, systematic pruning laid down in many manuals will ever answer for most of our vigorous native kinds.

The number of vines planted on an acre in France varies from one thousand to more than thirty thousand. Here, the testimony of the most experienced growers assures us that the smaller of these numbers is too large. The growth of some of our vines strikes a foreigner with amazement, annual shoots sixteen feet long not being uncommon. This strong growth makes it necessary to give our vigorous vines room enough to spread. If the rows are six feet apart, the distance between the vines should not be less than twelve feet for the Concord, nor less than sixteen for vines so rampant as the Rogers No. 15.

Many cases are on record where every other vine in a vineyard has been removed, and a year or two later half the remaining vines taken away, with good effect. We have no space to discuss the various methods of training and pruning now in vogue. The simplest is generally the best, and the simplest and easiest is that of a horizontal arm near the ground, with upright canes, which are cut back to three or four buds every year after fruiting. We say three or four buds, not two, as most of the text-books teach; for it is beginning to be known that in many vines the best clusters are produced from the third or fourth eye above the old wood. We believe this is especially true of the Diana and the Concord, and in pruning vines of these varieties we are careful to leave bearing wood enough.

Some men of experience, Mr. George Husmann in particular, are strenuous advocates of summer pruning, or pinching the ends of the young shoots during the summer, and they even advise beginning as soon as four or five leaves have appeared; but this practice is more talked about here than followed. Without waiting for the results of experiments which we have begun, we have great confidence in what is known as the strict Guyot system. This consists in renewing the horizontal arm annually, by cutting away the old arm at the end of the season and bending down into its place a new cane that has been allowed to grow for this purpose from near the base of the vine. The next year's fruit is raised from the fresh, vigorous buds of this new arm, and at the same time a new strong shoot is growing to take the place of the bearing cane the following season. This method has advantages apparent at a glance to the experienced cultivator.

Any system of pruning is better than none. It takes but a year or two for a neglected vine to get beyond the reach of the shears, and to become a tangled mass of half-ripened wood and useless shoots. In this case it is often simpler to cut the vine down and start afresh than to try to bring it into shape by trimming.

Grafting the vine is a matter which still tries the skill and patience of cultivators. Some recommend the spring as the proper time for grafting, and others the month of November. Grafting below the soil is preferred by some, and others succeed best six feet above the surface, but we must say that in both methods failure is the rule. We regret this, for any approach to certainty in this process would be of immense value. In proof we may mention that we knew a small two-bud cutting to be grafted on a vigorous stock in June, and to make from each bud a strong cane ten or twelve feet long the same season. In the case to which we refer the canes were layered the next spring, and the result was that in fifteen months from the time the tiny scion was inserted the experimenter had forty strong, well-rooted layers, worth, as it happened, a dollar apiece. If he had propagated his two buds in the usual way, by heat, he would have had two small vines instead of forty large ones. We cannot help thinking that at some time the

problem of grafting will be solved; and, if it should be, then nurserymen will find it profitable to raise seedling stocks from native seed for delicate growers like the Delaware and Rebecca.

The chief diseases of the vine are mildew and rot, the former, speaking generally, affecting the leaves, and the latter the fruit. With us, cold nights in July and August, after hot, damp weather, are almost sure to bring on mildew. The only varieties in our collection absolutely unaffected by mildew last year were the Salem, Concord, Una, Cottage, and Hartford Prolific. Some varieties suffered badly, losing all their leaves long before frost came. The mildewing of a few leaves on strong vines need cause no anxiety, for its ill effects will be wholly inappreciable. Sulphur has been looked upon as a specific against mildew, and even as a preventive of its attacks. We have tried it for three years, but cannot see that it checks the spread of mildew much, unless very thoroughly applied to the under side of the leaves as soon as the spots appear. A sulphide of potassium is said to be more efficacious than dry sulphur, and may be applied in solution by means of a syringe.

Rot is a more serious matter than mildew. It has ruined the usefulness of the Catawba, and makes certain other grapes an uncertain crop. It affected in Massachusetts last year, though very slightly so far as we observed, the Rogers Nos. 15 and 19, the Concord, and possibly one or two other kinds. It presents itself under various aspects; but, in whatever shape it comes, little is known of its cause, and no means of guarding against it has yet been devised. All that can be recommended is to select varieties for planting of perfect hardiness and vigor, and to discard all others.

Among insects, rose-bugs are sometimes a serious pest. They eat the vine blossoms with the utmost greediness. One *vigneron* in this State destroyed last year a peck, by measure, of these bugs by hand-picking and burning, no other means of getting rid of them being at all practicable. They exhibit a decided preference for the foliage of the Clinton grape, and will actually forsake all other vines in a large collection for the sake of feeding on the leaves of this variety. No other insects have become troublesome in this part of the country.

It is not many years since a few pounds of poor grapes

abundantly supplied the markets of our great cities, that now consume hundreds of tons of choice varieties every season. It would be tedious to give here a list of the prices for which grapes for table use have been sold in our markets, but we may say that we have never yet seen good grapes sold at a price which did not well repay the grower.

Discredit has been brought upon grape culture of late by exaggerated statements of the profits it affords. Exceptional returns in favorable years have been cited as an average, while short crops and failures have been kept out of sight. We have seen vineyards in this State that have borne crops of seven tons to the acre, but it would be unfair to reckon the profit of any vineyard on a basis of more than three and a half tons to the acre.

Grape culture will not suffer when its profits are fairly compared with those of any ordinary farm crops; and such a comparison is, it seems to us, the only way of getting a correct estimate. We can safely reckon that seven hundred Concord vines will produce, on an acre of ground, thirty-five hundred pounds each year. These, if sold for five cents per pound, will give a better return than any field of corn, with less than half the annual outlay for labor and manure than the corn would require. We may add that, while twice five pounds to a well-established vine is only a fair crop, five cents per pound is an extremely low price for grapes offered for sale in decent condition. The lowest wholesale price of Concord grapes in the Boston market last year was twelve cents per pound.

There is a steadily increasing demand for good fruit, and we may even say for fruit of every kind. As the supply increases, the price rises, showing that the supply provokes the demand. The price of strawberries, for example, — of which one Boston firm sold twelve thousand boxes in one day last year, — is three or four times as great as it was when only a third or a quarter as many strawberries were raised as now. Poor fruit, hastily gathered and carelessly packed, is always abundant and cheap, but it remains to be proved that the public will not prefer to pay the very highest price for the best article.

The literature of grape culture in this country is already respectable, and is annually increasing.

Of the books we have named above, Mead's Manual is the most pretentious, and Husmann's is the most useful. Du Breuil's treatise contains precepts and directions wholly unsuited to our vines and climate, and the text and notes of the American edition make together a curious mosaic of contradictory advice. The monthly horticultural journals afford the best index of the interest felt in grape-growing in this country; and it often happens that half their reading matter, and a very large proportion of their advertisements, relate to grapes and wine. Nurserymen are not rare who advertise vines by the half-million; and perhaps no better way can be found to get a comprehensive idea of the extent to which grape-growing is carried, and indirectly a notion of the size of the vine-growing area, than to study the advertising columns of the journals devoted to horticulture.

Dr. Grant's address at Canandaigua is a very able and instructive paper, and will well repay a careful study. No man in this country has a clearer conception than the author of this address of the comparative value of different grapes, or of the merits of the wines they produce. The first number of a Western monthly journal, devoted wholly to grapes and wine, has already appeared, and the magazine bids fair to be successful. It is edited by Mr. George Husmann, a man of great enterprise and wide experience, and we welcome its appearance as a pleasant sign of the increasing importance of the grape-growing interest in this country.

Important as is the growing of grapes for use as food, and profitable as it can be shown to be, the cultivation of grapes for wine will always take precedence of it. Little by little, from feeble and uncertain beginnings, wine-making in this country has risen to be a very important element of the national prosperity. It promises to take rank by the side of wool-growing, cotton-raising, and the production of breadstuffs.

It used to be the fashion, and may be customary even now among those who can indulge themselves in the choicest products of European vineyards, to sneer at wines of domestic growth; but as the question, "Who reads an American book?" is no longer asked in derision, so the query, "Who drinks American wines?" is becoming a thing of the past. To say nothing

of the Californian vineyards, in which mainly vines of European origin are grown, we can reckon at once at least fifteen kinds of grapes, wines made from which, and presumably pure, are now offered for sale in quantity. Other varieties, such as the Iona and some seedlings not yet disseminated, have produced wine of the highest quality, but not yet in quantity sufficient to become an article of trade.

There is of course much difference of opinion as to the comparative value of the various wines produced east of the Rocky Mountains, and we are perhaps justified in noticing some of these varieties in detail.

Although compelled at once to struggle against the attacks of disease and to compete with newer varieties, the Catawba grape still furnishes a very considerable proportion of our native wine. It is unfair to speak ill of the bridge that has carried us safely over from the days of ignorance in wine-making to the present enlightened period, but we must say that the Catawba grape has seen its best days. We should be of the same opinion even if it were not affected by disease, for newer and better kinds stand ready to take its place. Connoisseurs tell us that the wine of the Catawba is neither full nor rich enough, and that it is apt to be too sour. It can never give us what we need so much, a delicate hock wine. We have tasted many samples of Concord wine. Some were of incredible nastiness, while others, made from perfectly ripe grapes with the addition of sugar, were comparatively palatable, although by no means of great merit. The pure juice gives a claret; the sugared, as we have tasted it, a kind of nondescript, possibly to be classed as a sherry. The peculiar aroma or flavor of the wild grape — called, for want of a more descriptive term, "foxiness" — has been inherited in a modified degree by its descendants, and is unpleasantly perceptible in the Concord wine. We know, however, that in Florida and Missouri the Concord grape attains a degree of excellence it never reaches here, and that its wine is improved in a corresponding degree. The Clinton grape, the juice of which contains a good percentage of sugar, produces a strong, full, red wine, of considerable body but harsh and unpleasant. We may call such samples as we have tasted a rough claret, and we hardly think that this

wine will be popular. We imagine that the quantity of wine made at present from the Isabella grape is very small. We tasted recently sparkling Isabella wine ten years old, but it could hardly be called second-rate.

The Ives Seedling is not a new grape, but it has of late years been brought prominently before the public, and has received the prize offered by the Longworth Wine Company for the best wine grape for the whole country. We do not attach much importance to this award, for it is obviously absurd to select any one variety as *the* grape for general cultivation in a country of such wide extent as ours, and which comprises regions so different in climate and soil as are Maine and Florida. The grape itself is hardy, healthy, and productive. Its juice is of a remarkably dark color, and produces wine of great body and fulness. The sparkling Ives Champagne, so called, is very peculiar by reason of its color, and, though much praised, is in our opinion a very inferior wine, being either artificially sweetened, or else not sufficiently fermented. Wine from the Ives grape has a very marked aroma, agreeable to many, but not relished by critical judges.

We rank the Norton's Virginia grape much higher than the Ives. It gives a red wine of very high character, harsh at first, but which improves with age and gradually attains a good degree of refinement. In its peculiar class it is surpassed, in our judgment, by only one wine, and that made from a grape as yet little known. This variety, the Cynthiana, originated, we are assured, in the far West, and has been successfully cultivated in Missouri. It produces a red wine, less harsh and more refined than the Norton's Virginia, less cloying than the Ives, and possessing a delicate bouquet entirely its own. We had the good fortune to taste some of the earliest samples made by Mr. George Husmann, and we believe that the popularity of the Cynthiana will increase as fast as the wine becomes known. We have the vine under trial, but learn that its grape is, unfortunately, unsuited to our season and climate.

The Diana, when well ripened, produces a wine resembling the best German hocks, but richer and less acid. It is far superior to the Catawba wine, but its bouquet is so peculiar as to be offensive to some good judges.

The juice of the Diana mixed with that of the Delaware gives a sparkling wine of very great richness and excellence, but hardly dry enough to be called a Champagne of the first rank. The unmixed juice of the Delaware gives a wine of which any *vigneron* or any country may well be proud. A page of description would hardly suffice to set forth its merits, and even then we should not give a clear idea of its value to any one who had not tested it. It must suffice then, to say that the wine is rich, pure, and delicate, and that it possesses in an eminent degree all the qualities of a fine sherry, with an aroma and bouquet of its own. It needs several years' ripening to bring it to perfection. Sparkling Delaware is a choice and delicious wine.

As yet but very little wine has been made from the Iona. The grapes have been too scarce, and too highly prized for the table, to admit of their being set aside and saved for wine. The little which has been made has shown such surprising excellence, and such an assemblage of high qualities, as to astonish even those who were familiar with the grape, and who had consequently hoped that it would be as good for wine as for immediate use. We do not propose to give an extended analysis of its merits, but may simply say that the samples we have tasted surpass all Delaware wine, and justify us in believing that we have at last found a grape which will enable us to rival in this country the very choicest and most famous products of the vineyards of the Rhine. Better judges than ourselves do not think this belief extravagant or visionary.

One of Mr. Bull's seedlings, not yet made public, produces a very fine port wine, and among the others are some entirely devoid of pulp and giving great promise as wine grapes. The Rogers Hybrid No. 1 is said to make a fine sparkling wine, and we have received from Missouri a new seedling grape, called the Hermon, from the place of its origin, that gives, it is said, a genuine Madeira wine. If this is true, there is hardly a European wine of any rank that has not its counterpart in this country, and very few that have not their equals. Champagne, sherry, hock, port, Burgundy, and, we are told, Madeira wines, all have their representatives here; and when we reflect that until within a very few years the Catawba and Isa-

bella grapes were the chief sources of our wine, we may well stand amazed at the rapid and steady progress that has been made. Inalienable associations will always cluster around the very names of some choice foreign wines, and surround them with an illusive halo hard to dispel; but we believe that the close of the next decade will not only bring a vast improvement in the already excellent product of our vineyards, but will see a great revolution in the public taste, and American wines ranked as their merits deserve.

The question which just now seems to convulse the grape-growing world, and which has led to disputes matched only by those of the Big-endians and Little-endians is, Shall sugar be added before fermentation to such grape-juice as contains an abnormal quantity of acid, and is at the same time deficient in saccharine matter? It is said that grape-skins contain an amount of coloring and flavoring matter sufficient to make, if sugar and water enough be added, three times as much wine as is ordinarily obtained from a given weight of grapes. Those who do not hold this extreme belief yet assert that, when grape-juice has too little sugar and too much acid, it is perfectly fair to bring the amount of sugar in the juice up to the quantity which, when fermented, will produce the percentage of alcohol peculiar to the given wine. Others say that it is better to raise no grapes than to cultivate varieties whose juice is too poor to make good wine without factitious and unnatural additions. They declare, too, that the harmonious mingling of qualities which constitute perfect wine can never result from a mixture of sugar with poor grape-juice. We are not able to decide which side is right, but, while we lean towards those who favor the use of the pure juice, we must own that the temptation to double the product of an acre by the aid of sugar and water must be very strong indeed to any grower whose sole aim is profit. If nothing worse than sugar were added to grape-juice in this country there would be little cause for complaint. We do not *know* indeed that anything else is added, but unpleasant rumors are afloat respecting the treatment to which the Californian wines and those of Ohio are subjected before being offered for sale. We hope that these rumors are unfounded, and that wine-makers will find it as profitable, as it surely

must be pleasant, to furnish the public with pure wines, the genuine product of uncontaminated grape-juice.

The price of our American wines is still far too high, but when a competent writer estimates that we have in this country one million of acres of vineyards, with two millions more planted but not yet in bearing, we take courage and look hopefully forward to a day of lower rates. To be more specific, we say that we shall not be satisfied that the minimum price has been reached until a good hock or Sauterne wine — the kinds in which we seem to be most deficient, and which are, in our opinion, extremely desirable — can be bought for less than a dollar a gallon. This price will not be attained at once; and perhaps it is as well that it should not be reached immediately, for cheapness alone, with no ability on the part of the public to appreciate their merits, will not make choice wines popular. By the time that the prices we hope for become the standard rates, a generation will have grown up capable of estimating at their true value the wines whose advent we prophesy. The present race of Americans is joined to its idol, — whiskey, — and will prove hard to convert to a better faith.

A discussion upon the expediency of increasing the amount of wine produced in our country, or upon the moral and social questions involved in its use, would perhaps be out of place in an article that professes to be a mere record of the progress and condition of viticulture. Yet we did intend, when we began this paper, to say a few words upon the physiological effects of alcohol, to discuss at some length the current theories upon the matter, and to review certain illogical and slipshod essays recently put forward by the advocates of total abstinence, in which assertion has been mistaken for argument, and hearsay evidence for scientific proof. But the work of demolishing these absurd productions has been so well done by other hands,* that we need not undertake the task. We content ourselves with saying that, unless all our hopes and expectations are disappointed, the cultivation of the grape and the manufacture of wine will spread into places where neither is

* Alcohol and Tobacco. I. It does pay to Smoke. II. The Coming Man will drink Wine. By John Fiske, A. M., LL. B. New York: Leypoldt & Holt. 1869. pp. iv., 163.

dreamed of now; that where the vine is now cultivated with success vineyards will multiply tenfold; and that good, pure wine will in time be abundant and cheap.

It may, perhaps, be worth while to quote here some remarks made by Mr. E. W. Bull, in an address delivered at a session of the Massachusetts Board of Agriculture last December. After commenting upon the low price of wine in Germany, and mentioning the interesting fact that the last four hundred and thirty-two years may be divided, according to the quality of the wine produced in them, into

Those eminently distinguished	11
Very good years	28
Moderately good years	118
Middling quality wines	76
Inferior quality wines	199
Total	432

and according to their productiveness, into

Years of ample yield	114
Years of middling yield	18
Of poorer yield	99
Of failure, not paying expenses	201
Total	432

Mr. Bull goes on to say: —

"Now, if under these circumstances of low prices, and almost half the seasons unfavorable, in Germany grape-growing is still the most profitable agricultural pursuit, I think we may go on with the absolute assurance that we cannot fail to succeed in making the crop profitable, and more profitable than any other crop; and very possibly we may find the alternative that will keep our children at home. Grape-growing is the poetic phase of agriculture. The culture is easy, the harvest is delightful. Except ploughing the land once or twice during the season, the women and children could take the whole care of the vineyard, and when at last the crop is harvested the product from a single acre is often more than the product from all the rest of the farm.

"Take another point of view. Many a poor man finds it difficult to support his family and educate his children, as the circumstances of the time and the advancing standard make it necessary they should be educated, and spends his life-blood in merely keeping the place which

he has bought, and succeeds in educating his children only by the most severe toil. Let him have his half-acre or acre of grapes, from which he would get, possibly $1,500, — $2,000 has been realized, — surely $500 per annum; and you can see how that moment you lift that man, who was a slave to the ground, to competency and independence. His income will then give him leisure for reading, enable him to buy books and cultivate his love for art and literature, and make him such a man as an intelligent American citizen ought to be. I confess, gentlemen, that this aspect of the case gives me more pleasure than all others."

Mr. Bull's theories and hopes might be passed by as visionary, if we did not know that his arguments and example have induced many a farmer in his immediate neighborhood and throughout the State to plant vineyards, and thus to enjoy the profits of this new enterprise.

In the times to which we look forward the grapes that we prize now will be set aside for earlier and better kinds; the wines whose excellence is known now but to a few will be common property; and even in these Northeastern States we shall look neither to Ohio for our grapes, nor to Germany for our wines.

From Maine to Texas zealous experimenters are at work planting seeds and striving to get varieties of the grape better than any we now possess. Some carefully plant a few seeds in a flower-pot in their parlor, while others drill them in like wheat, by the bushel, over broad acres. Some are earnest in the belief that the great grape of the country will be a hybrid, others that it will be the result of direct planting, and all are pressing towards a common goal with so much energy and hope that we cannot doubt that the triumphs of the past decade, brilliant as they are, will be eclipsed by those of the next ten years. We would aid the work by precept and example, and invite our readers to join us in what has proved a source of yearly increasing satisfaction and pleasure.

"In manibus terræ: non hic vos carmine ficto
Atque per ambages et longa exorsa tenebo."

J. M. Merrick, Jr.

Art. VI. — Hungary and Roumania.

Some twenty years ago, in the full flush of European revolutions, and again shortly before that dark deed which brought about the downfall of republican freedom in France, the name of Hungary was, if I mistake not, a household word among the people of the United States, a romantic as well as a political interest having attached itself to that "War of Independence" round whose heroes and martyrs even the writers of contemporary history, in general so critically inclined, had already cast a poetic halo.

Lord Palmerston, when called upon to recognize Hungarian independence, replied that he knew only an "Austrian Empire"; but the United States were not indisposed to enter into relations of international amity with the new commonwealth. To the United States it was owing that those Magyar exiles who had found a shelter, though clogged with restrictions on their personal freedom, on Turkish soil, were not kept for an indefinite time in such confinement as would have suited the purposes of the Czar and the Kaiser, but were released and enabled to enjoy the welcome offered them by free nations. In the belief that the vicissitudes of fortune which Hungary has since experienced, and her position and prospects now that she has reattained self-government in a constitutional, if not in the more complete democratic form, will have an interest for Americans, I shall give some account of the political resurrection of the Hungarian realm, as well as of the perils which yet surround it, in consequence of its relations to what is called the "Eastern question."

When Lord Palmerston said, in 1849, that he knew no Hungary, but only an "Austrian Empire," he repeated the phrase he had used some eighteen or nineteen years before, on the occasion of the Polish war of independence. Then he had declared that he knew no Poland, but only "Russian dominions." In the mouth of one whom it was the fashion with ultra-conservatives to style "Lord Firebrand," that expression may have seemed strange enough; but I believe it could be explained, after all, by his earlier relations with Mus-

covite diplomacy, though such an explanation would reflect little credit on the memory of that able and powerful, but unprincipled statesman. At all events, he was guilty of a fallacy both in the case of the "Kingdom of Poland" and in that of Hungary, when endeavoring to make those countries appear simply as provinces of the respective "empires" governed by the houses of Romanoff and Habsburg. Even poor, crushed Poland, partitioned as she had been among three powers, had yet preserved some signs of national life and some distinct institutions of her own. In that part of Poland which was joined to Russia, the Constitution of 1815, engrafted upon that of 1791, established representative government, there being then two houses of parliament and a responsible ministry, as well as a separate army organization, the monarch having the title of "King of Poland," and the administration being carried on, during his absence, by a viceroy. The rising which began at Warsaw on November 29, 1830, and which soon assumed the proportions of a war, could therefore under no circumstances be regarded as a simple revolt of a "province" against an "empire." It was the movement of a distinct nation against an oppressive ruler, who, from the fact of his standing at the head also of another nation of vast military resources, was able to crush the feebler, freedom-loving power.

So it was with Hungary. Although under the same rulers as the other countries comprised in the "Austrian Empire," Hungary, down to 1849, had been a separate kingdom as regarded its constitution and the tenure of the royal power; the confines of the realm were clearly marked, and its territory was girdled by a *cordon* of custom-houses, which formed a commercial division, in addition to the political one, between the countries on the two sides of the boundary line. A "province" of the "Austrian Empire," Hungary therefore was not. The very name of *Kaiserthum* or *Kaiser-Staat*, as applied to Austria, only dates from the beginning of the present century, when Francis was compelled, through the misfortunes of war in the struggle against Napoleon, to lay down his imperial German dignity, which had become a mere shadow, and thereupon, as a slight solace, assumed the title of Austrian Emperor, or Kaiser. Constitutionally speaking, Hungary was not affected

thereby. For Hungary, the Austrian emperor remained simply a "king," though in some undefined way he had provided himself with an additional title, which the folly of men is wont to regard as an appellation superior to that of "king."

Having boundaries, representative institutions, and a government of its own, though connected by dynastic and other relations with Austria proper, Hungary, in 1848–49, first strove to improve its Constitution in the sense of greater parliamentary freedom and of political equality among the various races that dwell within the realm. Royalty was not to be done away with, but only to be restricted in its privileges. Before resorting to the "extreme" step of taking the management of their affairs into their own hands, nations generally require some act of intolerable oppression or treachery to be committed against them by their rulers. It was the double-dealing policy of the Habsburgs that drove the Hungarians into a war, during which the reigning house was declared to have forfeited its rights; the way being thus paved for the establishment of a republic, had it not been that the rising liberties of the people were crushed under the weight of a double military attack from abroad, combined with reactionary movements fostered by Imperial statecraft within.

The character of a mere "province" of the "Austrian Empire," which Lord Palmerston falsely attributed to Hungary, at a time when she seemed destined to acquire full independence, was in reality imposed upon that country through the sad issue of the war. In return for the declaration resolved upon at Debreczin, which pronounced the forfeiture of the "crown of St. Stephen" by the house of Habsburg-Lorraine, the Kaiser now declared the Hungarians to have forfeited their autonomy and their constitution through the fact of the rebellion. It was done on the *Verwirkungs-Theorie*, to use the special phraseology of Imperial officials. Henceforth Hungary was to be governed according to the pleasure of the monarch, the whole machinery of representative institutions, both in state affairs and in local matters, having been abolished by a stroke of the pen, or rather of the sword. "*Car tel est notre plaisir*" — that haughty expression of Norman-French despotism, which even yet lingers in the official inter-

course between the English Crown and its Parliament, though the spirit of government in England has fortunately changed for the better — was to be made a harsh truth in the once self-governed Magyar realm.

Then, for the first time, arose that Imperialist doctrine which would not acknowledge any longer the distinctions between the several component parts of the "Austrian Empire," — distinctions which are so broadly stamped upon them either by the differences of national character or by the influence of historical grouping. There was to be a "centralized Austria" under the black-yellow flag, held together by the iron bands of arbitrary rule, with no trace of national rights or popular liberties left standing. Robert Blum, Messenhauser, and the other champions of German democracy, were in their bloody graves at Vienna. On the gallows at Arad the hangman of his Imperial, Royal, and Apostolic Majesty had strung up eminent Magyar generals and statesmen by the dozen. In Italy the work of oppression was completed by numberless court-martial fusillades. There was consequently no impediment to the fulfilment of the Kaiser's desires. At least so it appeared for a time to the cabinet politicians of Vienna.

Yet the scheme of triumphant tyranny would not work. In the face of their victor, — who, the better to mark the relation in which he stood to the people of his capital, would never (from 1848 down to 1860) appear in public in any other than military garb, — the Viennese preserved an attitude of sullenness the more galling to the court because it formed so strong a contrast to the good-natured and forgiving temper of that pleasure-loving but withal free-minded population. Year after year passed by, but the Viennese would still remember their martyrs. Theirs is the only town in Europe which can boast of a monument worthy of the champions of the popular cause that fell in the street fights of the early part of 1848. It is a granite obelisk, towering aloft like a colossal finger of warning. To the honor of the Viennese be it said that, at the very time when oppression was rampant, they matured the proposition for the erection of that noble memorial. Nay, when the government, on being applied to by the communal council, refused to allow a suitable inscription to be placed on

the pedestal, the "assembled fathers" of the town resolved by a formal decree to refrain from adding any inscription at all, "until it could be done in proper form at a more propitious time."

Even as the people of Vienna would not be weaned from their liberal aspirations, so the Lombards and Venetians would not abandon their eager desire for a junction with their Italian brethren. Against the Italians, it is true, so long as they were unaided by foreign forces, the Court of Vienna was able to avail itself not only of a commanding strategic position and a large military array, but also of the superior martial prowess of its non-Italian subjects. Nor must it be forgotten that, in the Lombardo-Venetian kingdom, national tendencies were scarcely to be found beyond the urban populations and the better part of the "upper classes"; whilst the peasantry, animated by class hatred against the *signori*, and attracted in some degree to Austrian rule by a well-devised system of impartial justice in minor social matters, looked rather coldly upon the plans of deliverance formed by the democratic party of action, as well as by the more cautious and astute Piedmontese politicians. Since in Italy, as on the Continent in general, the agricultural class forms the vast majority, in fact more than two thirds, of the aggregate population, it is easy to see that Imperial rule had, after all, to deal only with a very small, though active, minority, which it was not difficult to overawe by a constant display of military force. The fact of the indifference, nay, in many cases, the positive antagonism, of the peasantry to the national tendencies of the more enlightened classes, has been testified to me by the two chief leaders of the Italian popular party. The nickname of "*Austriacanti*" was therefore often applied to the peasants, as well as to the time-serving or unpatriotic members of the higher ranks. Even during the war of 1859 many peasants were found ready to succor the Austrian soldiery on its retreat. It was a state of things similar to that which prevailed in many provinces formerly Polish, where the patriotic aspirations of the towns and of the more progressive nobility also found themselves checked, during a time of insurrection, by the sullen indifference of a class which, from the remembrance of long-standing griev-

ances, is of a somewhat suspicious disposition, and therefore, as a rule, little inclined to co-operate heartily with the people of the towns.

So it was also in Galicia, the Polish province under Habsburg sway. There class hatred was embittered even more by an artificially fanned antagonism of race. In Galicia, the population belong partly to the Polish race, properly so called, partly to the "Ruthenian" stem, which holds an intermediate position between the Poles, or "Lechs," and the Russians. Spreading over Lithuania, Podolia, Volhynia, Galicia, and Northern Hungary, the Ruthenians, according to their territorial position and the extent of their intercourse with their immediate neighbors, approach in speech and tendencies the Poles or the Russians, and may consequently, in an ethnological as well as in a political sense, be considered to occupy in a great measure a debatable ground. Those of them who are located in Galicia occupy the central portions of the province, around the capital, the Poles proper dwelling in the eastern and the western districts. This distribution of races, together with the class feuds between the peasantry and the aristocracy, enabled Metternich, in 1846, to quell a patriotic Polish movement in Galicia by a cruel massacre, in which the notorious Syela played an infamous part. It was a deed the more hideous and hateful because, even from the point of view of Austrian diplomacy, a reconstituted Poland would be a desirable consummation, as it would afford a shield against the aggressive tendencies of Russian Pansclavism. But though the Ruthenians, since 1846, have frequently been opposed by monarchical statecraft to their brethren, the Poles, the idea of Polish independence could not be vanquished even in Galicia. Hence this too, like the aspirations of the Lombards and Venetians, formed a bar against the establishment of a Centralized Austria.

In an even greater degree was this the case in Hungary. That country could be vanquished, kept down by the bayonet; but its political parties, with remarkable unanimity, would not hear of any political fusion with the other dominions of the house of Habsburg. There is, in that polyglot country, — which has within its precincts races differing as much as the Turks do from the Prussians, or the Italians from the Dutch, — a

wonderfully strong national spirit, the growth of a common historical development, against which the strength even of a Joseph II. failed, though he called ideas of progress to his aid, in his attempt to overcome aristocratic privilege in the interest of a more impartial, but nevertheless overbearing, monarchical rule. Hungary, during the popular struggles of 1848–49, was often called a "nationality." That appellation has, with many public writers and speakers, clung to it; but in point of fact it is a misnomer. Hungary is certainly not a nationality, in the sense in which we speak of an Italian, a German, a French, or even a Polish nationality. It is rather a compound of "nationalities"; and yet it has an unmistakable character of its own, which stands out in bold relief and explains in a great degree the vitality of its political constitution and the fruitlessness of the attempts made for its overthrow.

Austria has been called a Europe *in nuce*. The German, the Sclavonic, the Romanic, and the Ugrian races are represented in it, besides various odd fragments of tribes heterogeneously huddled together in some nooks and corners, as stray remnants and sediments of the migration drifts. What is true of Austria as a whole is even more true of Hungary and its so-called *annexes*. When we look back into history, we find Dacians, Bastarnæ, Getæ, Illyrians, Pæonians, Sarmatæ, Iazyges, Vandals, Bulgarians, Alans, Avars, Huns, Suevi, Quadi, Marcomanni, Gepidæ, Longobardi, Goths, Sclavonians of different denominations, Khayars, Wallachians, and last, but not least, Magyars — a people belonging to the same stock as the Fins and the Turks — successively sweeping into what to-day, after the "Ugrian" or "Ungrian" tribe of the Magyars, is called Hungary. There are other European countries that have been visited by a nearly equal succession of discordant tribes. But the East of Europe — Hungary and Turkey — have preserved the strongest traces of such national dissimilarity. In some respects, various parts of Hungary are even worse off on this score than certain Turkish provinces. There are districts in which every claim of one race is contested by half a dozen other races.

Hungary is inhabited at present by the central Magyar race, which is mainly settled on the plains; by different Scla-

vonian populations, chiefly inhabiting the more mountainous parts, but stretching also, in greater or lesser compactness, along the northern, western, and southern parts of the circumference; by the German race, which has spread along that great artery, the Danube, and through the towns in general; and by the Rouman, or Wallachian, race which is scattered over the eastern districts, where it touches, through Transylvania, the cognate population of the Danubian principalities. Transylvania, which the Hungarians insist on considering as part of their own country, as it covers their eastern flank by the smaller Carpathian range, is inhabited by a majority of Rouman-speaking but somewhat uncultivated people; the political strength, social power, industry, and intellect being chiefly represented by the Magyars, the Szeklers, — a people of Magyar descent, — and the "Saxon nation," — a German population settled there since the early centuries of our era.

In a numerical sense, every race may be said to be in a minority in Hungary. The Magyars, counting between five and six millions, are pretty well offset by the Sclavonians, taking these latter in the bulk. However, as the Sclavonians are somewhat scattered around the circumference of the kingdom, whereas the Magyars occupy a more concentrated position in the middle; and as the former are, moreover, split up into a number of tribes, — namely, Slovaks, Croats, Rascians, Schokaczes, Wends, Ruthenians, and others, — who lack a common medium of understanding, their different languages being still in the state of simple dialects; the Magyar nation has naturally a position of greater influence, even in intellectual matters. The chief source of progress in this respect, as well as in industrial affairs, is however the neighboring German nation, whose pioneers of civilization have penetrated into what, by the more ambitious among them, has sometimes been called their Colonial Department in the East. Altogether, the German population of Hungary may be reckoned at about two millions. It lives, fortunately, on the whole, on terms of good fellowship with the Magyar element, there being even a tendency among the German immigrants and settlers to Magyarize themselves in their family names, so that, under not a few strange-sounding names, a "Müller," "Schulze," or "Pfannenschmied" is

hidden. Upwards of two millions of Roumans occupy the greater portion of Transylvania, and are loosely scattered over the districts between that principality and the river Theiss. Politically disfranchised under the old Magyar constitution, which treated them contemptuously as the *plebs Valachorum*, they have, in some notable cases, been made use of as instruments for convulsing Hungary in the Imperial interest, for which part their low state of civilization — into which, it is true, they had been thrown by aristocratic misrule — eminently fitted them.

Shall I also mention the medley of Arnauts, Bulgarians, Armenians, Gypsy clans, and so forth, which goes to make up the full aggregate of the Hungarian population? Be it enough to say, that it would be difficult to conceive a more variegated hodgepodge of "nationalities" and tribes than are to be found thrown together, in "the happy-family" fashion, between the Carpathian range and the Danube.

But the strong state-forming power of the Magyars has given to the whole population a tone and a character of its own. With all that variety of races and tongues, which rendered it advisable down to quite recent times to use Latin as the official and parliamentary language, the Hungarian commonwealth had most distinctive features, and was imbued with a spirit difficult to tame down to the requirements of a levelling monarchical bureaucracy. Hence Hungary has been able to outlive terrible disasters brought upon her from without and worse internal dangers. Never have the latter been more trying to the cohesion of the realm than in the period immediately previous to the misfortune of Vilagos. Battling for independence and liberty against the house of Austria, the Magyars were assailed from within by local counter-insurrections, in which the fierce passions of hostile races, kindled by despotic guile, ran riot at the expense of that freedom which all might have enjoyed. Thus the Revolution had been internally undermined before it fell under the weight of the combined armies of the Kaiser and the Czar. But even that sad experience could not break the spirit of the Magyar nation. The great capacity for self-government which that Eastern race, whose origin is to be traced to a nomadic chivalry, had displayed in an equal degree with nations boasting of

an Anglo-Saxon descent, was still powerful enough to make the Hungarians bear up against the discouragement of the time.

The attempt made by Prince Schwarzenberg, after 1849, to compel them to yield a ready obedience to the rule of the sword, failed miserably. So did the more liberal, but still anti-Hungarian, policy of Herr von Schmerling, who endeavored to found a centralized Austria on the constitutional principle. At a first glance there was something specious and captivating in this latter scheme. To many it seemed but natural that the various "antiquated" institutions of the different populations of Austria should be altogether discarded, and a new fundamental law, on the modern representative pattern, set up in their stead, proclaiming uniformity of civic rights, irrespective of national history and distinctions of race. It was a plan which almost necessarily won the assent of the great industrial interests of the German provinces of Austria, — interests everywhere impatient of restrictions on their activity. To the great manufacturers, the mere idea of a possible return to a state of things under which a custom's line might be restored between Hungary and the other dominions of the dynasty appeared utterly preposterous. Their sympathies were therefore easily enlisted on the side of the Schmerling constitution.

On the other hand, it was easy to see that if that constitution were finally adopted, there was an end of the long-dreamed-of reconstitution of a United Italy, and an Independent Poland, not to speak of German Unity, which can never be complete without those Austrian provinces that have for so many centuries formed part of the Fatherland, — first under the Empire, and then under the Bund, or Federal League, which replaced it. At the same time, the Hungarians, priding themselves on a constitution nearly a thousand years old, would not receive from the hands and by the sovereign pleasure of a monarch that which they considered their imprescriptible right. A constitution thus arbitrarily bestowed might be arbitrarily taken away. The Hungarian idea of a constitution was that of a compact, or covenant, somewhat like the ancient Arragonese constitution; the king being only considered a lawful king after having sworn to observe the national fundamental law, and only remaining a lawful king so long as he observed his part of the

compact. The Schmerling notion of a constitution was that of a convenient machinery for raising money and passing enactments, with no "right of resistance" to illegal royal and imperial procedures attached to it. There was a radical divergence between the two opinions. If the Liberals of the Schmerling school asserted that the new Austrian constitution was in many respects more progressive than the old Hungarian statute, the Magyars replied, with some show of reason, that progress was best wrought out and secured by the free resolution of a people, and that, moreover, they did not mean simply to return to the old constitution of their country, such as it was before 1848, but that they intended to accept also the "amended laws" of that year of progress.

On the continued refusal of the Hungarians to send deputies to the new "Reichsrath" at Vienna, Herr von Schmerling uttered the haughty expression, "*We can afford to wait for them!*" Events have proved that the Hungarians could afford to wait for the downfall of the Schmerling ministry. The manœuvres which that able but crafty statesman employed in order to bend the Hungarians to his designs will be in the recollection of many readers. They were the same as those which had been employed during the Revolution of 1849. Whilst in Galicia the unscrupulous minister made use of the Ruthenian peasantry for the furtherance of his Austrian centralization scheme, he threatened the Magyars with the rekindling of separatist movements, and contrived to induce the Transylvanian Diet, in which a majority of Rouman deputies was assembled, to send delegates to the Reichsrath. In this way he meant to surround, and circumvent the Magyar population, overpower it with a coalition of secessionist elements, and compel it to sue for mercy.

This plan, also, failed; the triumph remained with the intended victims. To the undaunted perseverance of the Liberal Magyar leaders, not less than to the favor of unexpected events which broke the pride of the Imperial family, the success of the constitutional movement, of which Francis Deak was the most prominent representative, is to be attributed. To-day Hungary has once more its ancient frontiers, its time-honored fundamental law, modified by the reforms of 1848. Its ruler, after

having taken a special coronation oath, is recognized only as king. The name of Hungary is placed, in all state documents, on equal terms with that of Austria proper. The Honveds, who fought against the Kaiser, are acknowledged as having merited well of the country. The rank of General is given back to Klapka, Percyel, and Vetter, once among the military heads of what in the Hofburg was called a rebellion. In short, the restoration of liberty is wellnigh as complete as it could possibly be under a royal *régime*. A few steps further would place Hungary in the condition of full independence she seemed destined to enjoy at the time of her glorious struggle.

Even the most thorough-going advocates of independence, with very few exceptions, are, however, unwilling, under present circumstances, to hurry on matters in that direction. They see rocks ahead, and will not risk shipwreck by venturing too far. What I have stated above in reference to the multifarious races with which the country is dotted over, and among which the Sclavonians and Roumans are somewhat infected with secessionist dispositions, will explain this cautious behavior of even radical Magyar politicians. In the East, — in which Hungary may well be included, — race plays a greater part than is consistent with sound political principle. At the gate of Hungary stands an overgrown but still aggressive power, — Russia, — which in 1849 effected the final overthrow of the Revolution through the army led by Paskewitsch. Russia aims at the absorption of the vast countries that separate her from the Mediterranean and the Adriatic. In her eager desire to prepare them for annexation, she carries on a propagandism, founded on alleged consanguinity as well as on similarity of religious creed. The Sclavonian tribes scattered through Hungary and Turkey are thus allured to unite under a common national banner, though in reality they differ as much from the Russians, and from each other, as the Germans, Danes, Norwegians, Swedes, Dutch, and English, all of whom belong to the Germanic stock, differ from one another. The Greek Church is equally used as an engine of propagandism by Russia. The Greek Church numbers among its members not only many millions in Turkey, but also several millions on Transylvanian and Hungarian soil. The importance of this fact was recognized

in the so-called "Last Will of Peter I.," — a forged paper, no doubt, as I have stated in a previous article, — not less fictitious than the famous exclamation of "*Finis Poloniæ!*" wrongly attributed to Kosciusko, — but still containing maxims on which the successive rulers of Russia have evidently acted.

It is the fear of Russia which induces the Magyar statesmen to refrain from steps which might become fatal to the vitality of their commonwealth. What is at present called the "extreme left" in their Diet is chiefly composed of men who work under cover for separatist ends. In the districts inhabited by a Rouman and Servian speaking population these pseudo-radicals have just carried a number of elections, whilst in the Magyar, German, nay, even in the Slovak and Croat districts, the party favorable to Hungarian union has triumphed. Those who fail to perceive the character of this secessionist undercurrent are deceived by party denominations. There are members of the "left" who aim at detaching Transylvania and the Servian Banat from Hungary; others who, under the guise of a "Danubian Confederation" scheme, would swamp the Magyar nation by the addition of large numbers of a Sclavonian-speaking population from Northern Turkey.

Against both these plans the leading liberal and radical politicians are on their guard. Not even the name of Kossuth — who, unfortunately, has changed his political views as regards Hungary so entirely that he has actually gainsaid everything he stated when on his great tour through the United States — has been able to lend any lustre to that "Danubian Confederation" plan. It is denounced as got up in the Russian interest; and in the heated discussions which have latterly taken place upon the subject, it was brought to recollection that, towards the close of the Hungarian revolution, Kossuth had proposed to offer the crown of the country to a prince of the imperial family of Russia! Nor can this fact be explained away; for the very documents containing the proposal have been published, and their authenticity is not denied. If the proposition was not urged any further at that time, it was because events moved too quickly, and the subjection of Hungary by Russian arms had been accomplished before the offer alluded to could be properly made at the Russian head-quarters.

I have only referred to these matters as affording a key to the unwillingness undoubtedly existing among the vast majority of Hungarian politicians of all parties to adopt the counsels now and then vouchsafed them from a quarter to which formerly the best men of the country looked up with confidence.

The fact of the elections having gone against Hungarian union in the districts where a Rouman and Servian population is in a majority proves that there the "Eastern question" exercises an influence — a question of incalculable importance to the security of all Europe. The Rouman leaders at Bukarest, of the Bratiano stamp, and the Servian enemies of the Magyar realm, wish to cut up Hungary, the former demanding the whole country as far as the river Theiss. I have before me a curious correspondence, published at Paris in 1851, between Mr. D. Bratiano and a Hungarian exile of the name of Iranyi. In it the aims of the pan-Rouman propaganda are already openly avowed, the writer in the Rouman interest choosing the form of a republican profession of faith, in order to render his doctrines acceptable to the French public. It was at a time when France still lived in appearance under republican institutions, the *coup d'état* of Louis Napoleon not having yet been perpetrated. On the strength of that republican profession of faith, Mr. Bratiano subsequently belonged, for a while, to the "Central European Democratic Committee" at London, of which Mazzini and Ledru Rollin were members. Suddenly changing sides, however, the brothers Bratiano entered into relations with the French government, and, on the overthrow of the usurper Couza in the Danubian Principalities, brought about the election of Prince Karl of Hohenzollern to the throne of what is at present called "United Roumania." Since then, the Bratiano party, which formerly professed an undying hatred of Russia, have been frequently accused of underhand dealings with the government at St. Petersburg in a sense detrimental to Hungarian territorial integrity. Facts have come to light, showing that the Danubian Principalities may indeed be regarded as the centre of that movement which aims simultaneously at the disruption of Hungary and Turkey, thus endeavoring to deal a blow alike at a re-established free state

and at a stationary Oriental rule which is an impediment to certain schemes of aggression. It is this unfortunate connection which places all thoughtful friends of progress in such a sad dilemma, when called upon to side with one or the other party on the "Eastern question."

It may be useful to cast a glance here at the early attempts of the Czars to obtain influence in the Danubian Principalities. Ottoman supremacy over Moldavia and Wallachia had been established in 1393, by the treaty of Nicopoli, between Sultan Bajazet I. and Myrtche I., of Moldavia. It was sixty years before Constantinople even had become a Turkish city. At first the treaties stipulated for a mere Ottoman protectorate. The course of events converted it into a more substantial suzerainty, which gradually approached a complete sovereignty. Soon, however, attempts were made at a reconquest of independence on the part of the rulers of Moldavia and Wallachia, who strove to use the privileges left to them for throwing off the Turkish yoke. It is at that epoch we find the Czar of Moscow already casting a wistful glance on the Danubian provinces. Ivan III. — the same who married the niece of the last Byzantine Emperor — is known to have entertained decided notions respecting a claim of his own to the inheritance of "Eastern Rome"; and in furtherance of that object he allied his house and his political interests with Moldavia. The successors of Ivan also kept their attention fixed on the Danube.

Now the Turks, acting upon the maxim that Constantinople must be protected at the Danube, took the opportunity of a victory gained by them over the insurgent Wallachians to convert Wallachia into a Turkish pashalik. On their part, the Moldo-Wallachians became more and more accustomed to look to Russia as an ally. It was during the war begun in 1710 that Peter I. made overtures to the hospodars to secure them as confederates against Turkey. To Dmitri Cantimir he offered to render the princely dignity hereditary in his family, and to place his successors forever under Russian protection. Dmitri Cantimir eagerly closed with this proposal. In the treaty thereupon concluded, he was styled "Most Serene Highness, Lord and Sole Master of Moldavia, Confederate (*Colligator*) of Russia." A similar engagement was drawn up

between Peter I. and the Wallachian prince. Both hospodars then invited the Czar to enter their country with his army, and, when he had crossed the Pruth, assisted him to the best of their ability against Turkey. Peter, however, having been surrounded by the Turks, very nearly fell into the hands of his enemies, and owed his personal safety only to the circumstance of his mistress and future Czarina, Catherine, having bribed the vizier in command of the Ottoman troops.

From those days, Russian governments have steadily kept their eyes on Moldo-Wallachia. Already in 1772 Catherine II. proposed, at Foksani, to render the Danubian provinces independent. The project was shelved at that time. In the deliberations preceding the treaty of Kudjuk-Kainardji, in 1774, Russia repeated her demands. She ostensibly paraded the right of those countries to a national administration of their own, and contrived to obtain for the hospodars the title of "sovereigns," as well as the privilege of being represented at Constantinople by diplomatic agents. At the same time she took good care to assure to herself the important right of interference, under cover of guaranteeing the constitution of the Principalities against Turkey.

The annexation of the Crimea offers in this connection a lesson which may well be studied to-day. When, towards the end of the last century, Catherine I. was bent upon gaining a footing on the Black Sea, one of her first acts tending to this end was to favor the movement then made in the Crimea for forming that peninsula into an independent kingdom. Taking advantage of the jealousy the Khans of the Crimea felt towards their Ottoman suzerain, the Russian government espoused the cause of the Tauric Tartars, and thus contrived to bring about a severance of the ties which for centuries had bound the peninsula to Constantinople. Consequently, in the peace of 1774, the Crimea was acknowledged as an independent realm, — "*dependent only upon God*," according to the Russian wording. The people of the peninsula were henceforward to govern themselves "freely." Such were the stipulations imposed by Russia upon the Porte. Many misguided Liberals even extolled the magnanimity of the Czarina.

A few years more passed by, and the wily designs of Catherine were disclosed. The Crimea, unable by its own force to resist the pressure of Russia, and unaided by the armies of her former suzerain, fell, in 1787, an easy prey to the Northern invader. Thus ended an "independence," the establishment of which had been so pompously heralded!

It was a favorite idea of Catherine II. to create such "independent" states. Witness her scheme for the establishment of "independent Hellenic republics," under a Russian protectorate. In this latter plan, it is true, she met with a decided failure. The insurrection she caused Alexis Orloff to foster in the Peloponnesus by means of Muscovite agents, dressed as Greek priests, utterly miscarried. Had it been otherwise, a repetition of the Crimean game would have been the probable result.

Every step taken by the Autocrats, in reference to the Danubian Principalties, since the end of the last century, was an effort to convert the hospodars from vassals of the Porte into subjects of the Muscovite protector. Sometimes Russia worked in this behalf by mere diplomatic intrigue; sometimes by military invasion; sometimes by getting up sham insurrections, such as that of Ypsilanti, in 1821. The influence she acquired after the war of 1829 brought her very near to the accomplishment of her long-cherished ambition.

In proportion as the Czars consolidated their influence in the Principalities, they gradually dropped the idea of Moldo-Wallachian independence, only laboring for that of their own protectorship. Thus, in 1848, we find the Emperor Nicholas pronouncing himself, in a note written in the most violent terms, against the foundation of an independent and free Roumania, which had been the object of the revolution at Bukarest. The interest the Czars felt in the scheme of "independence" only lasted so long as they were able to direct the movement.

The policy of Russia in this matter, as in others, was always one of expediency. For the moment, not seeing her way to annexation, she is satisfied with setting the Roumans against the Magyars. The consolidation of either of these states — the one of quite recent formation, the other only just restored to its autonomy — is to be impeded, and passions are roused

which, it is no doubt hoped at St. Petersburg, will one day so convulse both Hungary and the Principalities as to place them at the mercy of a stronger neighbor.

I may here say a few words as to the social condition of Moldo-Wallachia, and the political consequences resulting therefrom.

"A middle class," so wrote one of the most zealous defenders of Rouman independence some years ago, when the Principalities had not yet acquired their present autonomy, — "a middle class has scarcely begun to form itself in Moldo-Wallachia." We have, therefore, to look mainly at the peasantry and the aristocracy. Now, unfortunately, the most numerous class, that which constitutes the bulk of the population, namely, the peasants, are deeply sunk in ignorance and superstition. They are under the thumb of their clergy; and that clergy has frequently enough shown Russian leanings. Of the noble families, the majority owe their very rise to the former Muscovite protectorate; and of the spirit which animates many members of the Polish and Hungarian nobility, nothing is to be found amongst them.

There remains, consequently, only a party of lesser boyards, and the population, numerically somewhat insignificant, of a few towns, in whom patriotic and liberal sentiments are to be met with. This will explain how the upstart Couza could so easily overthrow a state of comparative freedom, by dissolving the National Assembly in Napoleonic fashion, and then appealing to the suffrage of brutish masses, to whom, partly, gross baits were held out, or who were not intelligent enough to see the real case at issue. For several years Couza thus held sway, aping his Parisian model. Great was the sorrow of real patriots in the Principalities when they saw the very source of progress thus poisoned.

Nothing remained for them but to resort to an agitation against the usurper in public opinion abroad, and to prepare in the mean while a plan for his sudden capture and overthrow at Bukarest. The emissaries of the Liberal party of the Principalities, who were sent to Western Europe for the purpose of influencing governments to look favorably on the cause of right, had a most unsatisfactory reception. Lord Palmerston

gave the cold shoulder to the confidential envoy that approached him with a message. I vividly remember the expressions of sorrowful indignation which the latter used before me when he came back from that hopeless interview.

However, the secret plan for the overthrow of the tyrant had better luck. It sufficed that a party of determined men, who had gained over his body-guard, appeared one night suddenly before his bed, presenting pistols at his head, to bring about his speedy abdication. I believe those who formed the original plan for the deliverance of the country had no idea of calling a Hohenzollern prince to the vacated throne, but were rather bent upon the establishment of true freedom. This, at any rate, was the notion of that excellent man, — himself a cabinet minister of Couza before the latter had turned usurper, — Mr. Pano, who had filled at London and Paris the post of confidential envoy of the Rouman Liberal party during the time immediately preceding Couza's downfall. It was through him that exiled Italian, German, and French democrats were kept informed of what was quietly being prepared. Unfortunately he was not to see the dawn of freedom that appeared after Couza had been ejected. But neither had he the galling pain of seeing his country made once more the instrument of despotic intrigues. The last I heard of him was through the head physician of a well-known asylum near Vienna, where he had been placed, and where, a little later, he died in a state of mental aberration. Who knows whether sorrow at seeing the promising Liberal movement among his compatriots gradually thwarted by the elements which an aggressive absolutism had set in motion did not darken that intellect before so bright and lucid.

Hungarians, as well as Roumans of the United Principalities, might at present do much for the freedom of the East if that unfruitful quarrel of races were dropped. But the men of the Bratiano party still heap upon the Magyars the most galling insults, pronouncing them "intruders from Asia," who might, without injustice, be driven out into the wilderness from whence they came, and taunting them with "barbarism," because their ancestors formed a nomadic chivalry, whilst they, the Roumans, are, forsooth, the descendants of

the ancient Latin race, — that is to say, if we keep to historical truth, of the inhabitants of a penal settlement of the Roman Empire! As if we Europeans had not all successively come from Asia, a little earlier or a little later! The Hungarians, no doubt, were among the last arrivals; and Germans, who here had to suffer much from them at a time when they were yet a rude race, might be least expected to be partial to them. But must not good sense teach us to give up all invidious distinctions in presence of claims well made out by noble struggles for self-government? After all, that Magyar race had established on the banks of the Danube a sort of "British Constitution," even before the time when England had attained to proper parliamentary government, thus practically contradicting a superficial race theory which is at present too much in vogue.

If, on the other hand, we were to inquire into the Moldo-Wallachian claim to a classic origin, it would be easy enough to show, judging the question ethnologically, that the thinly sown Latin race of the ancient Dacians became, in the centuries immediately following the fall of the Roman Empire, so swallowed up in the invasions of Goths, Kumans, Petchenegs, and a flood of Tartar tribes, that any remnants of the original Roman element must have been completely remoulded. The Principalities have always served as one of the great gateways through which the tide of migrations flowed. Each wave of that human ocean left its impress. Thus the "purity of the pedigree" of the Moldo-Wallachian population is rather doubtful. Whilst antiquarian research may exercise its ingenuity upon the subject, the politician will dismiss the ethnological claim at once, and only take into consideration the urgent political events of the epoch, which unquestionably point to the necessity of maintaining Hungary as a unit.

I cannot do better, in concluding, than refer to the discourse which Louis Kossuth delivered in New York in December, 1851, and which is printed in the edition of his collected speeches under the title, "On Nationalities." This speech was made at a dinner of the press, presided over by Mr. Bryant, the poet. Treating of the relation of the Magyars to the other races of Hungary, Kossuth said that "no word

has been more misrepresented than the word 'nationality,' which is become in the hands of absolutism a dangerous weapon against liberty. . . . . If language alone makes a nation, then there is no great nation on earth: for there is no country whose population is counted by millions but speaks more than one language. . . . . But on the European continent there unhappily has grown up a school which bound the idea of nationality to the idea of language only, and joined political pretensions to it. . . . . This idea, if it were not impracticable, would be a curse to humanity, a death-blow to civilization and progress, and throw back mankind by centuries. It would be an eternal source of strife and war. . . . . Nothing but despotism would rise out of such a fanatical strife of all mankind."

Then, after having denounced those who would "claim from Hungary to divide its territory, ... to cut off our right hand, Transylvania, and to give it up to the neighboring Wallachia; to cut out, like Shylock, one pound of our very breast, — the Banat, and the rich country between the Danube and Theiss, — to augment by it Turkish Servia," Kossuth continued: "It is the new ambition of conquest, but an easy conquest, not by arms but by language. So much I know, at least, that this absurd idea cannot, and will not, be advocated by any man here in the United States, which did not open its hospitable shores to humanity, and greet the flocking millions of emigrants with the right of a citizen, in order that the Union may be cut to pieces, and even your single States divided into new-framed independent countries, according to languages."

"And do you know, gentlemen," the orator went on to say, "whence this absurd idea sprang up on the Continent? It was the idea of Pansclavism, — that is, the idea that the mighty stock of Sclavonic races is called to rule the world, as once the Roman did. It was a Russian plot; it was a dark design to make out of national feelings a tool to Russian preponderance over the world."

At that time the exiled Hungarian leader spoke and acted in accordance with the views of the best elements of his nation. With his later changes I have here nothing to do. On the question of "Hungarian Nationality," the most progressive

men of his country still adhere to the opinions he then gave utterance to, — opinions founded in the very nature of things existing in that peculiar Eastern region. It is not by shaking such a complicated, but still necessary, political edifice as Hungary to the ground that freedom can be promoted. It is rather by raising up again those bulwarks of European security which an encroaching autocracy has contrived to throw down through intrigue and brute force. Commonwealths like those of Hungary and the Danubian Principalities ought to join hands in such a work. To venture upon deadly strife with each other can only bring about for both of them the fate which has befallen unhappy Poland.

KARL BLIND.

ART. VII. — 1. *A History of the Intellectual Development of Europe.* By JOHN WILLIAM DRAPER, M. D., LL. D. New York. 1863.

2. *Ancient Law; its Connection with the Early History of Society, and its Relation to Modern Ideas.* By HENRY SUMNER MAINE. London. 1863.

EVERY attempt to discover the laws to which social changes conform must run great risk of being frustrated by the mere immensity of the mass of details which the investigator strives to arrange in orderly sequence. Seemingly numberless as are the phenomena dealt with by the physical sciences, they bear no proportion, either in multitude or in variety, to the facts upon which the historical inquirer must build his scientific theorems. Facts concerning man in his physical relations to soil, climate, food, and the configuration of the earth, blend with facts concerning the intellectual and moral relations of men to each other and to the aspects of nature by which they are surrounded, making up a problem of such manifold and multiform complexity, that it may well have long been deemed incapable of satisfactory solution. The fit subject of wonder is, indeed, not that we are as yet unable to arrive at accurate prevision

amid such a diversified throng of phenomena, but that, considering the meagreness of our knowledge in many other departments, we should have been able to detect any uniformity whatever in human affairs, and having detected it, to affiliate it upon trustworthy primordial principles.

In determining the laws of history, the ordinary inductive methods, so potent in chemistry and physics, are instruments of but little efficiency. The extreme heterogeneity of social phenomena is apt to make their employment very misleading. Many of the worst political fallacies now current have resulted from the perverse application of the methods of Agreement and Difference to cases where the composition of causes is so complex as to render hopeless all attempts at an inductive solution. In the science of history, the deductive method must be used, no less than in astronomy, though under different conditions and with different limitations. It is no less essential, in order to conduct our investigation securely to its final issue, that we should make extensive use of elimination. Minor perturbing elements must for a time be left out of consideration, just as the inequalities of motion resulting from the mutual attraction of the planets were at first passed over in the search for the general formula of gravitation. The discussion of endless minute historical details must be reserved until the law of social changes has been deduced from more general phenomena, and is ready for inductive verification. A law wide enough to form a basis for historical science must needs be eminently abstract, and can be profitably sought after only by contemplating the most general or most prominent characteristics of social changes. The prime requisite of the formula of which we are in quest is that it should accurately designate such changes under their leading aspect.

Now by far the most obvious characteristic common to a vast number of social changes is that they are changes from a worse to a better state of things,—that they constitute phases of progress. It is not asserted that human history has in all times and places been the history of progress; it is not denied that at various times and in many places it has been the history of retrogression; but attention is called to the fact — made trite by long familiarity, yet none the less obstinately misconceived

— that progress has been on the whole the most prominent feature of the history of a considerable and important portion of mankind. And it is to the scientific interpretation of this fact that the present article is devoted.

Though several passages in ancient literature express the opinion that the earliest men were little superior to brutes,* there is no reason for supposing that the idea of continuous progress ever entered into the social and political speculations of ancient philosophers.† Far from supposing the human race to have advanced in strength, virtue, and intelligence, they for the most part bewailed its constant degeneracy. Scarcely could two men of later times load upon a wagon the stones which Hektor and Diomedes hurled with ease at their antagonists; and even decrepit Nestor lightly quaffed from the goblet which the feebler hands of succeeding nations might vainly strive to stir from the table. Yet even this heroic race has degenerated since the days of Tydeus and Bellerophon; and in the iron age which follows, men are afflicted with grievous calamities, reaping just retribution for their mischievous knavery and profligacy. Hardly does it profit a man to be just;‡ wholesome contrition (Αἰδώς) has quit the earth; and, as a fit consummation, Zeus may shortly be expected to overwhelm all his unworthy creatures in common ruin.

Among the Stoics and the Roman jurisconsults, the golden age of popular belief was refined into a blissful state of nature,

* Æsch. Prom. 451–515; Eurip. Suppl. 201–215; Lucret. V. 923, *seq.*; Horat. Sat. I. iii. 99; Juvenal, XV. 151; Manil. I. 90–94.

† "Ancient literature gives few or no hints of a belief that the progress of society is necessarily from worse to better." (Maine, p. 74.) I do not recollect any passage where a belief in progress is clearly expressed, unless it be in Seneca, Nat. Quæst. VII. 25. "Veniet tempus quo ista quæ nunc latent, in lucem dies extrahat, et longioris aevi diligentia. . . . . Veniet tempus, quo posteri nostri tam aperta nos nescisse mirentur."

‡ Νῦν δὴ ἐγὼ μήτ' αὐτὸς ἐν ἀνθρώποισι δίκαιος
Εἴην' ἐμὸς υἱός. ἐπεὶ κακὸν ἐστι δίκαιον
Ἔμμεναι εἰ μείζω γε δίκην ἀδικώτερος ἕξει
Ἀλλὰ τόδ' οὔπω ἔολπα τελεῖν Δία τερπικέραυνον.
— Hesiod, Opp. Di. 270.

"Damnosa quid non imminuit dies?
Aetas parentum, pejor avis, tulit
Nos nequiores, mox daturos
Progeniem vitiosiorem." — Horat., Carm. III. 6.

wherein manners were simpler, passions more under control, and legislation more equitable, than in the period known to history. Mr. Maine has admirably delineated the process by which, from the constantly felt want of a system of principles fit for settling disputes between Roman citizens and foreigners, there gradually arose in the Prætorian courts an equitable body of law founded upon customs common to all nations alike. That this process, even while being energetically carried on, should never have been correctly understood or interpreted as a phenomenon of moral improvement, shows in the most striking manner how foreign to ancient modes of thought was the conception of progress. Far from perceiving the real character of the noble juristic system steadily growing up under their own supervision, — daily attaining grander proportions as the grotesque and barbarous elements hallowed by local usage one by one were eliminated from the mass of equitable ideas which formed their common substratum, — the Prætors of the Republic and the great Antonine jurisconsults, under the influence of Stoic conceptions, supposed themselves to be merely restoring to their original integrity the disfigured and partially obliterated ordinances of a primeval state of nature. The state of faultless morality and unimpeachable equity which constituted the ideal goal of their labors, they mistook for the shadow of a real though unseen past.

The mighty sway exercised by the ideas of Roman jurisprudence over all departments of modern thought is nowhere more clearly to be discerned than in the subsequent history of this conception. The great writers who in the seventeenth century illustrated with exquisite beauty and clearness the doctrines of Public Law seem to have been completely saturated with the notion of a primitive natural code, fit for regulating international concerns, and for supplying everywhere the shortcomings of civil legislation, its degenerate offspring, whose worth must be uniformly rated according to the degree in which it approaches the perfection of its parent. The influence of this conception, so thoroughly incompatible with a consistent belief in progress, may be best appreciated by reflecting on the extent to which contemporary legal literature, whether embodied in expository treatises or in judicial decisions, is impregnated by

it. The appeals to "right reason" and "natural reason," which since Blackstone's time have filled so large a place in juristic dissertation, bear unequivocal marks of their origin. Somewhat less subtile, but equally notorious, has been the influence of the Roman theory upon social and historical speculation. The vulgar opinion that national decadence in general, and the decline of the Roman Empire in particular, may be ascribed to the prevalence of luxury, and the abandonment of barbarous simplicity, is a case in point. The wide-spread notion of a Social Compact traces its pedigree to the same remote source from which sprang the Ethics of Epictetus and the juridical theories of Puffendorf.* And the extravagant doctrines of Rousseau, advocating so far as practicable a return to the primitive happy state,

"When wild in woods the noble savage ran,"

were merely distorted caricatures of the prevalent opinions of antiquity respecting the more or less hopeless deterioration of the human race.

According to Mr. Maine, "the tendency to look not to the past but to the future for types of perfection was brought into the world by Christianity"; and his statement, with some qualifications, may be accepted as profoundly true. Of the three ancient nations, whose lines of moral, intellectual, and religious development by their convergence resulted in Christianity, the Greeks and Romans, as we have seen, embraced with one consent the melancholy doctrine of human retrogression. Far more hopeful was the view of life taken by the eminent thinkers and writers of Palestine. Among the Jews, it is true, traditions of a long-lost state of primitive innocence and happiness were more or less current, as is seen in the myth of the garden of Eden and man's expulsion therefrom. But this particular tradition bears upon its face strong indications of a Persian origin,† and seems to have been entirely ignored by Jewish writers, until the late age of the apostles. Be

* See the discussion of the doctrine in Austin, Prov. Jurisp. 331–371; Kant. Rechtslehre, Th. II. Abschn. i.; Stahl, Phil. des Rechts, II. 142; and Maine, Chap. IV.

† Bohlen's Genesis, II. 57–59; Colenso, §§ 1065, 1087–1090.

this as it may, Hebrew prophecy, from beginning to end, is inspired by exulting faith in a future state of glory destined to eclipse and render of no account all that had preceded it. The Messianic kingdom might indeed in its general features be copied from the romantic reign of David, but it was to be a copy immeasurably transcending its original pattern. These expectations of future glory were, however, reserved for Jews alone. For all other nations the fate in store was irretrievable ruin. They were to be dashed in pieces like a potter's vessel. But on passing into Christian hands, the Messianic theory assumed a different aspect. It was metamorphosed into the doctrine of Christ's millennial reign upon the earth, in the blessings of which all nations were equally to share, on complying with certain prescribed conditions. Thus, for the first time, there appears a well-defined belief in the possible advance of all mankind to future perfection; thus do we find presented, albeit in crude and meagre outline, the rudiments of the modern idea of progress. The Christian theory of human perfectibility, ever preserving a subtle antagonism to the classic theory of deterioration, has in modern times assumed grand and imposing proportions, and, allying itself with the conclusions of scientific investigation, it is now rapidly driving its opponent from the field. Antiquated conceptions of a past state of nature must abdicate in favor of modern conceptions of a future state of equilibrium. Civil legislation must no longer be judged by its conformity to the rules of "natural reason," but by its power of fulfilling the requirements of advancing humanity. And as for the noble savage, the results of historic research may be summed up in Dickens's emphatic declaration that he is "a prodigious nuisance and an enormous superstition," — that "his virtues are a fable, his happiness a delusion, his nobility nonsense."

The illustrious thinkers of the last century, who endeavored to study human history from a scientific point of view, were unconsciously led into an error from which contemporary writers have not as yet entirely freed themselves. The followers of Turgot and Condorcet were prone to regard progress as something necessary and universal. They attempted to account for it, much as Lamarck tried to explain organic develop-

ment, as the continuous and ubiquitous manifestation of an inherent tendency toward perfection. Baseless as such a theory obviously is, it has nevertheless infected subsequent literature to a surprising extent. Thus Dr. Whately, in his edition of Archbishop King's Discourses, asserts that "civilization is the natural state of man, since he has evidently a natural tendency towards it." Upon which it has been aptly remarked that, "by a parity of reasoning, old age is the natural state of man, since he has evidently a natural tendency towards it."* Mr. Adam labors under a similar confusion of ideas, when he finds fault with Sir G. C. Lewis for upholding the doctrine of progress while admitting that certain races have never advanced. In taking this course, the great scholar exhibited his usual good sense and caution; and, as he was ever wont to do, kept closely to the facts of the case. Yet for this Mr. Adam accuses him of virtually dividing mankind into two differently constituted races, of which the one possesses, while the other lacks, the inherent tendency toward perfection! † Closely allied to this error is that which assumes that the theory of progression requires us to suppose that nowhere at any time has there been a temporary retrogression. Thus, Mr. Goldwin Smith, in his "Lectures on the Study of History," holds that "positivists" cannot preserve consistency without admitting that the reign of Charles II. was an advance upon the Cromwellian Protectorate. Mr. Mansel, in his "Limits of Religious Thought," still more preposterously declares that on the theory of progression we ought to regard the polytheism of imperial Rome as a higher form of religion than the earlier Hebrew worship of Jehovah. While thinkers of the opposite school, in order to save their cherished doctrine, inconsiderately accept dilemmas of this sort, and strive to coax the annals of the past into affirming the uninterrupted advance of civilization.

I cite these examples to show how vaguely the doctrine of progress has hitherto been apprehended. The fallacy of supposing civilization to have proceeded serially, or uniformly, or in consequence of any universal tendency, is nearly akin to the fallacy of classifying the animal kingdom in a series of as-

* The Progress of Nations (London, 1861), p. 45.

† Theories of History, p. 87.

cending groups, — a fruitful source of delusion, which it was Cuvier's great merit to have steadily avoided. The theological habit of viewing progressiveness as a divine gift to man,* and the metaphysical habit of regarding it as a necessary attribute of humanity, are equally unsound and equally fraught with error. Until more accurate conceptions are acquired, no secure advance can be made toward discerning the true order of social changes. Far from being necessary and universal, progress has been in an eminent degree contingent and partial. Its career has been frequently interrupted by periods of stagnation or declension, and, wherever it has gone on, it has been forwarded not by any inherent tendency, but by a concurrence of favorable conditions. Again, without going quite so far as to say, with Mr. Maine, that "the stationary condition of the human race is the rule, the progressive the exception," † we must still be careful to remember that the communities which have attained to a conspicuous degree of civilization constitute a numerical minority of mankind. Contemporaneously with the rapidly advancing nations of Europe exist the sluggish nations of Asia, and the almost stationary tribes of Africa and Polynesia. So irregular, indeed, has been the march of civilization, that most stages of progress may be made the subject of ocular investigation at the present day.

In the science of history, therefore, old "means not old in chronology, but in structure: that is most archaic which lies nearest to the beginning of human progress considered as a development, and that is most modern which is farthest removed from that beginning." ‡ Let us, then, pluck from our minds every twig and rootlet of the insidious tendency to associate lateness in time with completeness in development.

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* "It is impossible for mere savages to civilize themselves. . . . . Consequently man must at some period have received the rudiments of civilization from a superhuman instructor." (Whately's Rhetoric, p. 94.) A statement not altogether compatible with the one just quoted from the same author in the text.

† Ancient Law, p. 24. In Tylor's Early History of Mankind (p. 190) may be found some grounds for believing that even the lowest human races have advanced in civilization, though to an almost inappreciable extent. (Cf. Lewis, Methods of Observation in Politics, Vol. I. p. 302.)

‡ M'Lennan, Primitive Marriage, p. 9.

Spain under Philip III. was probably less civilized than it had been under Abderahman III.

In view of these considerations, but little need be said in criticism of the doctrine of cyclical progression,* which was formerly asserted with more or less clearness by several philosophers, but which owes its thorough elaboration to Vico. At present this theory is likely to find but few advocates; and its clandestine influence upon speculation is fortunately insignificant. We have never known the beginning or the end of a historic cycle, and have no inductive warrant for believing that we are now traversing one; while the analogies drawn from the solar system, which probably first suggested the theory, are sufficiently disposed of by the fact that even the planetary motions were not cyclical so long as they were progressing toward mobile equilibrium.

Fortified by the foregoing reflections, we are now in a condition to examine a very remarkable theory respecting the constitution and development of society, which, though long in a rudimentary form familiar to the minds of scholars, has only within the present century exerted a notable influence. I refer to the doctrine of "the social organism," of which it will be convenient to begin by scrutinizing the earliest form,—that, namely, in which the whole human race, with respect to its development, is likened to an individual man.† The conception is an old one. Plato, in his "Republic," instituted an elaborate comparison between the chief divisions of society and the faculties of the human mind; and Hobbes, long after him, endeavored to trace with still greater precision a resemblance between society and the human body, expending in the effort much laudable but bootless ingenuity. More recently, Rotteck, in the introduction to his *Allgemeine Geschichte*, has defined universal history as the biography of mankind. The same conception frequently appears in the great work of

* "Jam redit et virgo, redeunt Saturnia regna,
Alter erit tum Tiphys, et altera quæ vehat Argo
Delectos heroas; erunt quoque altera bella,
Atque iterum ad Trojam magnus mittetur Achilles." — Virg. Ecl. IV.

† The doctrine is admirably stated in the famous remark of Pascal, — "Toute la succession des hommes, pendant la longue suite des siècles, doit etre considérée comme un seul homme, qui subsiste toujours, et qui apprend continuellement."

Comte, and the part played by collective humanity in his later speculations is well known. But no previous writer has pushed the analogy between individual and social development so far as Dr. Draper. It is the central idea which serves, though not always efficiently, to bind together the immense heterogeneous mass of facts accumulated in his "History of the Intellectual Development of Europe." Premising that "man is the archetype of society, and that individual development is the model of social progress," Dr. Draper proceeds to divide the history of civilization into five distinct periods, namely, the ages of Credulity, Inquiry, Faith, Reason, and Decrepitude; answering respectively to the periods of Infancy, Childhood, Youth, Manhood, and Old Age, in the individual*. It soon appears, however, that collective humanity corresponds not to one individual, but to several; for Grecian civilization having passed through all these epochs, and having expired, modern civilization entered upon its career, in which it has by this time attained the estate of manhood. Roman history is treated as a digression, and its position in the scale of development is not clearly indicated. The intellectual development of the ancient Jews, so essential an element in the history of civilization, is entirely passed over. And as to Egypt and the great Asiatic communities, we are led to infer that, after running through the earlier stages of national life, they had, by the dawn of authentic history, arrived at old age.

The mere statement of this arrangement is doubtless enough to reveal its purely arbitrary character. But the importance of the subject will justify a closer examination. Let us note the chronological limits assigned by Dr. Draper to his successive epochs. The Greek age of credulity, ending with Thales, is followed by the age of inquiry, which closes with the Sophists. The age of faith extends from Sokrates to Karneades; the age of reason from Aristotle to Claudius Ptolemæus; the age of decrepitude from Philo to the closing of the Attic schools by Justinian. Forbearing to criticise the earlier parts of this scheme, it may be remarked that the age of faith is an entirely superfluous interpolation. In so far as the labors of Sokrates resulted in the application of dialectics to logical and ethnical

* Draper, pp. 1, 11, 15.

philosophy, the period in question was an age of inquiry; in so far as they resulted in the establishment of an improved scientific method, it was an age of reason. It is indeed difficult to see how Pyrrho and the New Academy can be regarded as the culminating products of an age of faith; or how Sokrates, the "originator of the most powerful scientific impulse which the Greek mind ever underwent," * can be said to have ushered in such a period.† It may likewise be asked, In what respect does an age of faith differ from an age of credulity? If by faith we mean the attitude assumed by thoroughly religious minds in contemplating the universe under its unknowable aspect, then an *age* of faith has not yet been reached, and, instead of corresponding to the youth of mankind, it would answer to its fullest maturity. The only other correct definition of faith is that which makes it synonymous with credulity. And whichever of the two we adopt, Dr. Draper's classification must equally be pronounced a failure.

In his arrangement of the epochs of European history, there is a still more striking anomaly. The age of credulity is not distinctly marked. The age of inquiry embraces the period of the formation of Christian doctrine, ending with the capture of Rome by Alaric. The age of faith extends from the foundation of imperial Constantinople to the Renaissance. Thus it will be noticed that the first five Christian centuries are assigned at

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* Grote, History of Greece, Vol. VIII., Preface.

† Dr. Draper's whole account of Greek philosophy is strangely inaccurate; but no part of it betrays so much carelessness as his treatment of Sokrates. He neither understands his relation to the Sophists nor his attitude toward physical investigation, quietly ignoring all that great scholars, like Mr. Grote, have written on the subject. His treatment of Bacon is equally perverse, consisting chiefly of wholesale abuse directed against the great master of inductive philosophy because he did not profit by the discoveries of Copernicus and Gilbert. If great men were to be measured by their shortcomings instead of their achievements, they might all have to step from their pedestals. Leibnitz rejected the law of gravitation; Laplace heaped contumely on the theories of Fresnel; Comte eschewed the results of psychologic research; Harvey contradicted Aselli's discovery of the lacteals; and how often has Bichat's unlucky definition of life been quoted in derision of one of the greatest thinkers and most consummate observers the world has ever seen. In Bacon's day there were grave difficulties attending the Copernican theory, which were first solved by Newton, half a century later. If it is a mark of genius readily to accept new discoveries, it is no less a mark of wisdom to be dissatisfied with imperfect evidence. (See Powell, Order of Nature, 65; and Laplace, Essai sur les Probabilités, 252.)

once to the European ages of inquiry and faith, and to the Greek ages of reason and decrepitude. Now, who were the Europeans who are represented as emerging at that time from intellectual childhood into intellectual youth? They were for the most part the very Greeks who, by the same philosophical indications, are said to have been passing from manhood into old age. The same influx of Oriental upon Hellenic thought is judged to be at once an index of senile decay and of youthful vigor. Can anything more clearly show the arbitrary character of the whole arrangement? Christianity was as much a product of ancient thought as Neo-Platonism. Porphyry and Proklos were no whit more Hellenic than Clement and Origen. It was the advent of the German tribes which introduced the modern state of things; and the closing ages of antiquity cannot be rightly called either decrepit or immature. The elaboration of the Christian system was their absorbing work; and Christianity was in nowise the offspring of undeveloped intelligence. It comprised whatever there was of greatest practical efficiency in Hebrew theosophy, in Greek dialectic, and in Roman jurisprudence; and all this diversified material it fashioned into the enduring mould upon which the features of modern society were destined to be modelled. Symptoms of the childhood of society would more judiciously be sought for among the barbarian followers of Odoacer and Clovis; and the degenerate continuation of ancient life might perhaps be assigned to the Byzantine empire, which lingered through the Middle Ages, neither adding to the past achievements of the Grecian prime, nor taking part in the energetic movements going on by its side, until its profitless existence was terminated by the sharp scymitar of the Mussulman.

The history of the Arabs, when carefully studied, yields to Dr. Draper's theory no better support. There is no evidence that the period of faith ushered in by Mohammed was preceded by anything which could be called an age of inquiry. The century of glorious religious and military activity which followed the death of the Prophet undoubtedly culminated in a brilliant age of reason, which, long surviving the political decay of the Arabian empire, was only extinguished by the arrival of brute force in the shape of half-civilized Spaniards and bar-

barous Turks. Herein lies the difficulty of assigning to Arabian civilization an age of decrepitude. From political considerations alone, that age may be said to have commenced in the East with the accession of Motassem (A. D. 838), and in the West one hundred and fifty years later, with the death of the hagib Almanzor. Yet the most illustrious scientific achievements of the Arabs took place long after this. The great names of Averroes, Arzachel, Geber, Alhazen, Algazzali, and Avicenna, are all comprised within the eleventh century and the first half of the twelfth. The dreary epoch of Almoravide supremacy was at the same time an epoch of active intellectual progress.

For the eminent rank which he assigns to Arabic civilization, and for calling attention to the innumerable ways, hitherto not sufficiently recognized, in which it has stimulated the subsequent development of mankind, Dr. Draper is entitled to receive signal praise. But so much cannot be said for the odd disposition exhibited throughout his work, not only to refer the best part of Greek culture to an Egyptian source,* but uniformly to exalt the non-European civilizations at the expense of the European. This tendency has an obvious connection with his opinion that the great Asiatic nations passed in remote antiquity through the earlier stages of collective life, and arrived long ago at a stationary but vigorous old age. History, however, does not afford the requisite data for enabling us to reason upon the early state of Asia with much certainty. Neither Chinese, Hindus, Assyrians, nor Egyptians seem ever to have possessed the art of insuring authenticity in their records; and if we apply to the accounts of these ancient nations the rigorous canons of criticism laid down by Lewis and Grote, we shall come to the conclusion that we really know but little about them. But it will be well to note that the extremely rude and barbarous structure of the Chinese language is decidedly at war with the theory that the Chinese people have at any time been notably progressive; and the most cursory perusal

* The extravagant theory of a profound science possessed by the Egyptian priesthood from a remote antiquity, and imparted to itinerant Greek philosophers, has been utterly destroyed by Sir G. C. Lewis, in his learned work on the "Astronomy of the Ancients."

of the writings of Confucius strengthens the philological inference that China, far from having reached an advanced stage of development, has been irrevocably fixed at a very low point. The nation whose greatest literary production is the "Sse-Chou" may perhaps be lingering in stunted infancy; it is certainly not enjoying a green old age. While with regard to Egypt and Hindustan, as well as Assyria, it may be said that the colossal monuments which have adorned those countries since prehistoric times bear witness to the former prevalence of a barbaric despotism totally incompatible with social mobility, and therefore with well-sustained progress.* The sculptures upon these monuments, moreover, betoken a very undeveloped condition of the artistic faculties. Space permitting, it would be easy to show that the caste-system of Hindustan has resulted from the crystallization of family relations peculiar to a quite infantine state of society.† And the social phenomena of Egypt, so far as they are known, have similar implications.

Not to dwell too long upon details of this sort, it may be observed that the hypothesis of old age is altogether inadequate to explain many striking phenomena of national decline. Marked evidences of a falling off in civilization have been found among the Tunguz, the Kalmucks, and some North American tribes, as well as in South Africa;‡ and no one will contend that, in the case of these archaically modelled communities, decline can be pronounced equivalent to senility. I do not attach much weight to the current opinion which ascribes the declension of higher communities to their conquest and absorption by less cultivated races; though the conquest of mediæval Russia by the Mongols may perhaps be cited in its support. For when a civilized nation is thus compelled to succumb to barbarians, it is usually owing to the presence of vital defects in its internal structure, which may safely be presumed to indicate spontaneous decline. Greece could not have been absorbed by Macedon, Rome would not have yielded to the Teutonic assault, the Spanish Moors would not have lost their empire, had not domestic decay preceded and invited for-

* "Ancient Egypt may be considered as a great *latifundium*, or plantation, cultivated by the entire population as the king's slaves." — Lewis, Astr. Anc., p. 435.

† M'Lennan, Primitive Marriage, p. 255.

‡ Tylor, Early History of Mankind, pp. 184, 185.

eign violence. But in neither of these three typical cases can the growing weakness be interpreted as an index of political old age. The Greeks were conquered because they had never attained political stability, though if Athens had been victorious in the Peloponnesian war they might have done so. Instead of gradually uniting to form an integral nation, their numerous civic communities had by mutual repulsion continually weakened each other. But the unsocial spirit of autonomy, to which this result was due, was at its maximum in the earliest period of authentic Grecian history, and cannot therefore be considered a symptom of old age. The fatal defects in Roman civilization were the draining away of the rural population of Italy for military purposes, and the consequent expansion of slave labor; the lack of a representative system of government, which, with territorial enlargement, rendered necessary an imperial despotism; and the ignorance of political economy which allowed C. Gracchus to establish a maximum price for corn, and which consigned the administration of the provincial revenues to the rapacity of private speculators. Moorish civilization perished, because it had no municipal, aristocratic, or ecclesiastic bodies interposed between the caliph and his equally enslaved subjects. None of these flaws in social organization have any special connection with overripe senility. They belong to the earlier rather than to the latter epochs of national life. And I believe that history, if narrowly scrutinized, will yield no support whatever to the statement that nations grow old and die.

Dr. Draper's theory that social life repeats the phases of individual life will not, therefore, bear a critical examination. Fragmentary as are the considerations which have been adduced, they still suffice to prove that his division of history into epochs is thoroughly fanciful, and they imply moreover that every similar division, sustained though it be by numerous facts, must surely be overthrown by other facts which are equally essential. Dr. Draper's arrangement is perhaps as good as any other which could be framed with equal minuteness; but all such attempts must ever be impracticable, because they rest upon an unproved and unprovable assumption. Against the assimilation of the social to the human organism may be urged two insurmountable objections. In the first

place, a social aggregate has no definite form. It has no symmetry, either spherical, radial, or bilateral. It has not even the specific unsymmetry which characterizes the mollusks. Fluctuating and irregular to the last degree in its external shape, society might more fitly be compared to a polypdom than to anything higher in the scale. In the second place, the living units of society "do not and cannot lose individual consciousness," while "the community as a whole has no corporate consciousness." "The corporate life must here be subservient to the lives of the parts; instead of the lives of the parts being subservient to the corporate life." * Of these distinctions, the second is the more important, but both are fundamental. Owing to the Protean changes undergone by society in its figure, it has been impossible for Dr. Draper clearly to determine the number of social biographies of which past history consists. Yet either the whole human race must, on his theory, be likened to one individual, — as was done by Pascal, — or its separate communities must be likened to several individuals. In the first case, we have an individual, of which some parts develop, while others do not; and in the second case, we have a company of individuals of whom, while some have attained various stages of maturity, others have lingered in perpetual infancy. With these last — the stationary savage tribes — Dr. Draper's theory cannot even pretend to deal. Their history presents not even a superficial resemblance to individual life. The human child either dies or grows to manhood. Seeds kept for centuries in an Egyptian sepulchre may flourish when exposed to sunlight, but with man such a suspension of development is out of the question.†

* Spencer's Essays, 2d series, p. 154.

† Viewed as a formula for intellectual development alone, the slight amount of truth contained in Dr. Draper's theory has been much more accurately enunciated by Comte, in his well-known doctrine of the three stages of mental progress. That the human mind advances from credulity through inquiry to knowledge is a marked instance, and probably the only one, of the alleged parallelism between the individual and the race. This kind of progression, together with a vast number of other striking conceptions, is expressed in Comte's statement that human thought has passed from the theological, through the metaphysical, into the positive stage. To these three periods Dr. Draper's ages of credulity, inquiry, and reason may be said roughly to correspond; though the latter, far more than the former, partake of the nature of chronological epochs, and have accordingly a curtailed applicability and a diminished value.

But though Dr. Draper's theory does not express the truth, it nevertheless contains an approximation to the truth. A society cannot indeed be compared to a man, but it may still be treated as an organism. And the laws of social evolution will have been to a great extent determined, if they can be proved to be identical with the laws of organic evolution. The law according to which progress takes place in the animal and vegetable worlds, discovered by Von Baer, has been extended to the phenomena of human society by Herbert Spencer. A few illustrations of the general law of organic evolution will assist the reader in understanding the special laws next to be stated.

The researches of Harvey on generation established the truth that every animal has at some period of its existence consisted simply of a structureless and homogeneous germ. Whether this germ is detached from the parent organism at each generation, as in all the higher animals, or only at intervals of several generations, as in the *Aphides*, or plant-lice, matters not to the general argument. In every case the primitive state of an animal is a state of almost complete homogeneity. The germ-cell of a lion, for instance, possesses no obvious characteristic whereby it can be distinguished from the germ-cell of a horse or a dog. Moreover each part of it is as nearly as possible like every other part, in texture, in chemical composition, in temperature, and in specific gravity. Here, therefore, in two ways it is seen that homogeneity is the parent of heterogeneity. In the first place, all animal germs are homogeneous with respect to each other, while the animals developed from them present all kinds and degrees of diversity; and, in the second place, each germ is homogeneous with regard to itself, while the creature developed from it is extremely heterogeneous. The successive differentiations and integrations by which this change is brought about may be found described in any modern work on organic development, and need here be but briefly sketched. The first differentiation is that between the outer coating of the cell on the one hand, and its interior contents on the other hand. The outer coating is then differentiated into two layers, the outer layer being destined to become the nervo-muscular system, the inner layer to produce

the digestive apparatus. Between these two, by a further differentiation, arises the rudiment of the circulatory system. Then are successively differentiated from the alimentary canal the liver, stomach, and various secreting glands, until the once homogeneous intestine becomes very complex. Along with this, a parallel process is going on in the outer layer: the nervous system, at first appearing as a mere groove upon the surface of the germ, finally exhibits an almost endless heterogeneity. First, there is the difference between white and gray tissue; then there are the differences between the cerebrum, the cerebellum, the medulla oblongata, the spinal cord, and the sympathetic system, each of which parts, moreover, is extremely heterogeneous in itself; and then there are the innumerable differences entailed by the highly complicated connections established between one nervous centre and another, by the inextricable crossings, interlacings, inosculations, and entanglements of different sets of nerves with each other, and by the circumstance that some nerves are distributed upon muscles, others upon glands, and others upon ganglia. These will suffice as examples of differentiation. Then, as cases of integration, may be cited the union of all the bile-cells, which are one after another differentiated from the surface of the alimentary canal, into one distinct organ, the liver; and also the union of the anterior vertebræ to form the skull. It should be noted that integration is just as essential a part of the whole process as differentiation. If the latter alone took place, we should have simply a chaotic medley of organs and tissues. Both operations are requisite to produce a system of organs capable of working in concert. And if either process goes on alone, in any part of the body, disease, and often death, is the result. Cancers, *lupi exedentes*, and malignant tumors are merely vague differentiations, which, never becoming integrated in harmony with the rest of the organism, end by maiming and finally destroying it. To give a full list of the differentiations which take place in the course of the evolution of a single individual would be to write the entire history of the animal organism. This was done by Von Baer; and whoever will take the trouble to read his *Entwickelungsgeschichte* will have the truth thrust upon him at every page that organic evolution is a

change from homogeneity to heterogeneity. To Mr. Spencer must be assigned the honor of having demonstrated that integration, or the change from indefiniteness to definiteness of structure, is an equally vital part of the process.

Now the advance from indefinite homogeneity to definite heterogeneity in structure and function, which constitutes organic development, has been found to be equally the chief characteristic of social progress. On considering primitive societies, we find them affected by no causes of heterogeneity, except those resulting from the establishment of the various family relationships. As Mr. Maine has shown, in early times the family and not the individual was the social unit. In the absence of anything like national or even civic organization, each family chief was a monarch in miniature, uniting in his own person the functions of king, priest, judge, and parliament; yet he was no less a digger and hewer than his subject children, wives, and brethren. Commercially, it is needless to state, all primitive communities are homogeneous. In any barbarous tribe the number of different employments is very limited, and such as there are admit of being undertaken indiscriminately by any one. Every man is his own butcher and baker, his own tailor and carpenter, his own smith, and his own weapon-maker. Now the progress of such a society toward a civilized condition begins with the differentiation and integration of productive occupations. That each specialization of labor entails increased efficiency of production, which reacting brings out still greater specialization, is known to the tyro in political economy. Nor is it less obvious that, with the advance of civilization, labor has been steadily increasing in heterogeneity, not only with regard to its division among different sets of laborers, but also with regard to its processes, and even its instruments. The distinguishing characteristic of modern machinery, as compared with the rude tools of the Middle Ages or the clumsy apparatus of the ancients, is its heterogeneity. The contrast between the steam-engine of to-day and the pulleys, screws, and levers of a thousand years ago assures us that the growing complexity of the objects which labor aims at is paralleled by the growing complexity of the modes of attaining them. Turning to government, we see that by differentiation

in the primeval community some families acquired supreme power, while others sank, though in different degrees, to the rank of subjects. The integration of allied families into tribes, and of adjacent tribes into nations, as well as that kind of integration exhibited at a later date in the closely knit diplomatic interrelations of different countries, are marked steps in social progress. Next may be mentioned the differentiation of the governing power into the civil and the ecclesiastical; while by the side of these ceremonial government grows up insensibly as a third power, regulating the minor details of social intercourse none the less potently because not embodied in statutes and edicts. Comparing the priests and augurs of antiquity with the dignitaries of the mediæval Church, the much greater heterogeneity of the latter system becomes manifest. Civil government likewise has become differentiated into executive, legislative, and judicial. Executive government has been divided into many branches, and diversely in different nations. A comparison of the Athenian popular government with the representative systems of the present day shows that the legislative function has no more than any of the others preserved its original homogeneity. While the contrast between the *Aula Regis* of the Norman kings and the courts of common law, equity, and admiralty, — county courts, queen's courts, State courts, and Federal courts, — which are lineally descended from it, tells us the same story concerning the judicial power. Nor should it be forgotten that the steady expansion of legal systems, to meet the exigencies which civilization renders daily more complex, is an advance from homogeneity to heterogeneity.

Not only is the general law of organic development thus illustrated in the internal progress of all nations, it is also conspicuously exemplified in the divergent courses pursued by many communities which have started from a common origin. The Germanic tribes, which in the fifth and sixth centuries acquired control over Roman Europe, were nearly homogeneous with respect to each other. The description of the Germans, left by Tacitus, would doubtless have applied indiscriminately to Goths, Saxons, Franks, and Lombards. None of them had advanced far beyond the primitive patriarchal system of government, nor had any of them experienced much industrial

differentiation; and so there was but little scope left them for the display of social unlikenesses. Even so late as the twelfth century, the interior structure of each great European community was, except in minor points of detail, very similar to that of all the others. The feudal system, chivalry, the crusading spirit, scholasticism, monasticism, serfdom, baronial isolation, private war, ecclesiastical supremacy, — these were the striking features of society at that time, in England as well as in Spain, in France as well as in Italy. But in our day the heterogeneity is notable. The so-called Anglo-Saxon nations are differentiated from all the rest by their political individualism; but the free organization of America differs widely also from the free organization of England. Absolutism, on the other hand, is not the same thing in Austria that it is in France, nor is Catholicism the same thing in France that it is in Spain; while the free Protestantism of Prussia bears little resemblance to the narrow Protestantism of Scotland and Sweden.

Whether the human race, ethnologically considered, has ever presented a close approach to homogeneity, is perhaps uncertain. For our present purpose, however, it is immaterial whether the various races of mankind are descended from one primitive stock or from several primitive stocks. It is enough to show that where there has been marked social progress there has also been marked ethnic differentiation. The widely spread tribes of unprogressive American Indians, now so rapidly disappearing, have retained to the end their ancient physical, intellectual, and moral homogeneity. But in the descendants of the primitive Indo-Europeans, from the flabby and pursy Hindu to the wiry and long-limbed Kentuckian, may be seen the immense heterogeneity entailed by long-continued differences of social organization and of physical environment. They present numberless unlikenesses of size, strength, complexion, feature, of anatomical conformation, of moral susceptibility, and of intellectual capacity. Still further illustration is to be found in the languages spoken by these Aryan nations. Eight families of languages, containing each from half a dozen to a score of mutually unintelligible dialects, are descended from the common mother tongue spoken by our Aryan ancestors before they had left the neighborhood of the Hindu Kush. The development

of the Semitic languages from a single parent tongue furnishes a parallel example. But this is far from being the whole of the case, for a careful study of the structure of language in itself shows that its growth takes place by differentiation and integration. I have elsewhere* collected some evidence of this; proving, among other things, that integration takes place in the progressive coalescence of roots with their terminations, as well as in the concentration of syllabic sounds, and in the increasing logical coherence of clauses; while the generation of dialects, the rise of parts of speech, the growth of widely divergent words from a common root, as well as the growth of widely divergent languages from a common stock, were shown to be prominent instances of differentiation.

But, by a still greater sweep of generalization, Mr. Spencer has likewise included in Von Baer's formula the changes of inorganic nature, having traced the development which it describes throughout a vast number of phenomena, both telluric and cosmic.† Thus, by reason of its very comprehensiveness, the law of universal evolution can no longer supply the precise kind of information we desire regarding historic phenomena. It is the law not only of social changes but of all other changes. It utters no truth concerning human development which is not true of all development. Though it is the ultimate law of history, it is silent respecting the differential characteristic by which a historic event is distinguished from a physical event. The ultimate and general formula needs to be supplemented by one that is derivative and special; which shall describe organic evolution in terms inapplicable to inorganic phenomena; which shall be, in short, a comprehensive definition of life. This additional step was taken by Mr. Spencer, in 1855. In his "Principles of Psychology," published in that year, is to be found the first statement of that "proximate definition of life," which contains by implication the law of organic as distinguished from inorganic progress.‡

* "The Evolution of Language," North American Review, October, 1863.

† First Principles (2d ed.), pp. 308–396.

‡ As a formula for social progress, it had already been foreshadowed, though probably without full consciousness of its entire significance, in Mr. Spencer's Social Statics, published four years earlier.

According to this exhaustive definition, life — and intelligence likewise, as the highest known manifestation of life — consists in the continuous establishment of relations within the organism in correspondence with relations already existing in the environment. The degree of life is high or low according as the correspondence between internal and external relations is complex or simple, extensive or limited, complete or partial, perfect or imperfect. The lowest forms of life respond only to the simpler and more homogeneous changes which affect the whole of their surrounding medium. The relations established within a plant answer only to the presence or absence of a certain quantity of light and heat, and to the chemical and hygrometric relations existing in the enveloping atmosphere and subjacent soil. In a zoöphyte, besides general relations similar to these there is established a special relation in correspondence with the external existence of certain mechanical irritants, so that its tentacles contract on being touched. The increased number of correspondences, as we ascend the animal scale, may be seen by contrasting the polyp, which can simply distinguish between soluble and insoluble matters, or between opacity and translucence in its environment, with the keen-scented bloodhound and the far-sighted vulture. And the increase of complexity may be appreciated by comparing the motions respectively gone through by the polyp on the one hand, and by the dog or vulture on the other, while securing and disposing of its prey. The advance to higher forms of life consists in the orderly establishment of internal relations of sequence answering to external relations of coexistence and sequence, that are continually more heterogeneous, more remote in space and in time, and at once more general and more special; until at last we reach civilized man, whose intelligence responds to every variety of external stimulus, whose most ordinary needs are supplied by apparatus of amazing complexity, and whose mental sequences are often determined by circumstances as distant as the Milky Way, and as ancient as the birth of the solar system.

The lower forms of life respond to the changes going on about them only in an imperfect and general way. A tree, for instance, meeting by changes within itself none but physical

and chemical changes without, exhibits life in a very simple form. We habitually regard it as less alive than a polyp, because the polyp, by displaying contractility and nascent sensitiveness, responds to a greater variety of external stimuli. Yet the zoöphyte, possessing no specialized organs of sense, can oppose but one sort of action to many diverse kinds of impression. Phenomena so different as those of light and heat, sound and mechanical vibration, can affect it in but one or two ways, — by causing it to move, or by slightly altering its chemical condition. Here let it be noticed that the modes of response to outer relations are far less heterogeneous than those relations themselves. Passing now to civilized man, at the other end of the animal scale, we find a state of things exactly the reverse. To each kind of external stimulus there are many possible modes of response. Not only, for example, does the human organism sharply distinguish between variations which affect the eye and those which affect the ear; not only do eye and ear, which are themselves organs of amazing complexity, discern an endless number of differing tones and hues, as well as a great variety of intensities and qualities; but each particular manifestation of sound or of light is capable of awakening in the organism very different actions according to circumstances. Tennyson's traveller, who, walking at nightfall in a strange land, hears the moaning of a distant sea,

> "And knows not if it be thunder, or a sound
> Of rocks thrown down, or one deep cry
> Of great wild beasts,"

will adopt a course of action more or less in conformity with his environing relations, according to the degree of his sagacity and the extent of his experience. Streaks of light and strata of cloud in the horizon will lead the practised mariner and the unskilled passenger to different conclusions. A cartoon of Raphael or a symphony of Beethoven will excite different emotions in an artist and in a person of little sensibility. And from the swinging of a cathedral lamp a philosopher will draw inferences which have escaped the attention or baffled the penetration of thousands of uncultivated beholders. Thus, with civilized man, present external stimuli are surpassed in heterogeneity by their internal effects.

Note also that as the organism advances the environment itself increases in extent and diversity. The environment of an oyster covers but a few yards of beach or of water, and comprises but few favorable or hostile influences. The physical environment of a modern European extends over a great part of the earth's surface, and his mental environment is scarcely limited in time or space. His welfare is not unfrequently affected by accidents occurring at the antipodes, while his plans for the coming year are often shaped with conscious or unconscious reference to events which happened centuries ago.

Thus we are led almost imperceptibly to look upon Mr. Spencer's definition of life as furnishing the key to the phe nomena of history. Scarcely is it possible, in illustrating that definition, to avoid a continual reference to the facts of collective as well as to those of individual life. Indeed, since the history of a community is made up of the acts of its individual members, a formula sufficiently abstract might be expected to be capable of including both in one expression. History resembles biology, not because in each a progress is traced from infancy to old age, but because both record the advance from incompleteness to completeness of correspondence achieved alike by organisms as a whole and by societies. The progress of society, like that of organisms, is, throughout, a process of adaptation. If we contemplate material civilization under its widest aspect, we discover its legitimate aim to be the attainment and maintenance of an equilibrium between the wants of men and the outward means of satisfying them. And while approaching this goal, society is ever acquiring in its economic structure both greater heterogeneity and greater specialization. Agriculture, manufactures, commerce, legislation, the acts of the ruler, the judge, and the physician, have since ancient times grown immeasurably multiform, both in their processes and appliances. And here it is to be carefully noted that this specialization has resulted in the greatly increased ability of society to adapt itself to the emergencies by which it is ever beset. The history of scientific progress is in like manner the history of an advance toward complete correspondence between our mental conceptions and outward reali-

ties. Truth, which is the end of all honest and successful research, is attained when subjective relations are perfectly adjusted to objective relations. And what can be the consummation of moral progress but the thorough adaptation of the desires of each individual to the requirements arising from the desires of all neighboring individuals? Thus the phenomena of social and of organic progress are seen to correspond to a degree not contemplated by those thinkers who first instituted the comparison between them. The resemblances here brought to light are far more deep-seated than those which Dr. Draper and others have endeavored to deduce from a mere collation of epochs. The dominant characteristics of all life are those in which social and individual life agree.

Let us now glance at one or two subordinate truths, which will greatly facilitate the comprehension of the general theory. First, from the twofold circumstance that life is high according as the organism is heterogeneous, and also according as it is adjusted to surrounding conditions, may be derived the corollary that heterogeneity in the environment is one of the chief determining causes of social progress. The environment of a society comprises all the circumstances, adjacent or remote, to which the society may be in any way obliged to conform its actions. It comprises not only the climate of the country, its soil, its flora and fauna, its perpendicular elevation, its relation to mountain-chains, the length of its coast-line, the character of its scenery, and its geographical position with respect to other countries; but it includes also the ideas, feelings, customs, and observances of past times, so far as they are preserved by literature, tradition, or monuments; as well as foreign contemporary manners and opinions, so far as they are known and regarded by the community in question. Premising this, it will be seen that, owing to the political isolation of ancient communities, the heterogeneity of their environments must have been trifling. Holding but little intercourse with each other, and accommodating their deeds and opinions mostly to the conditions existing at home, their progress was usually feeble and halting. And for the same reason, their modes of life and their mental development were far more deeply impressed with the characteristics of surrounding nature

than is the case in modern times. Herein is contained whatever of truth is conveyed in Mr. Buckle's statement, that in Europe man has been more powerful than nature, while out of Europe nature has been more powerful than man. The contrast is not between Europe and the rest of the world, but between the isolated civilizations of antiquity and the integrated civilization of modern times. Owing to the enormous heterogeneity of the environment to which modern nations are forced to adjust themselves, progress in later ages has been far more rapid and far more stable than of old. The physical well-being of an ancient Greek was not enhanced by an invention made in China, nor could his philosophy derive useful hints from theories propounded in India. But in these days scarcely anything can happen in one part of our planet which does not speedily affect every other part. That the rapid and permanent character of modern progress is in great measure due to this circumstance will be denied by no one. And thus is explained the wonderful civilizing effect of various events which have from time to time brought together distant sections of mankind; of which it will be sufficient merely to name the campaigns of Alexander, the spread of Roman dominion, the Arabian conquests, the Crusades, and the voyages of Columbus, Magellan, and De Gama.

Now "the law which governs the changes in organic beings is such that the lower their place in a graduated scale, or the simpler their structure, the more persistent are they in form and organization. . . . . In whatever manner the changes have been brought about, ... the rate of change has been greater where the grade of organization is higher."* And this fact Mr. Darwin interprets as resulting from "the more complex relations of the higher beings to their organic and inorganic conditions of life." Comparing the fact and its explanation with the historical generalization above given, it will be seen that we have here a new point of community between social life and organic life in general.

Secondly, observe that the living beings lowest in the scale are nothing but simple cells, as witness the *Protococcus* and the *Rhizopoda*. In the second volume of his "Principles of Biol-

* Lyell, Antiquity of Man, pp. 441, 442.

ogy," Mr. Spencer has shown that progress in morphological composition, both in the animal and vegetable kingdoms, consists to a certain extent of the union of these primeval cells into aggregates of higher and higher orders. Note also that the coalescence of adjacent parts performing like functions, such as we see in the crab when contrasted with the milliped, is a leading feature in organic development; for this process, increasing the specialization of the organism, thus steadily facilitates its adaptation to the environment. In the study of social evolution, we are met by quite similar phenomena. Let us consider what is implied by the conclusions to which Mr. Maine has arrived in his admirable treatise on Ancient Law by an elaborate inquiry into the early ideas of property, contract, and testamentary succession, and into primitive criminal legislation: "Society in ancient times was not what it is assumed to be at present, a collection of *individuals*. In fact, and in the view of the men who composed it, it was *an aggregation of families*. The contrast may be most forcibly expressed by saying that the *unit* of an ancient society was the family, of a modern society the individual. We must be prepared to find in ancient law all the consequences of this difference." * Evidences of this state of things are to be detected in the internal structure of all the Aryan communities.† Recently, Mr. M'Lennan has revealed a still more archaic condition of humanity, in which not even the family, properly speaking, existed.‡ But passing over this state, — in which the social units might be aptly compared to those lowest Rhizopods which have scarcely any individuality whatever, — attention is called to the fact that primitive families, like unicellular organisms, are aggregates of the first order. The family government excluded not only individual independence, but also state supremacy. Vestiges of a time when there were no aggregations of men more extensive than the family, and when there was no sovereign authority except that exercised by the

* Ancient Law, p. 126.

† Witness Roman gentes, Greek phratries, Celtic Clans, Hindu and Slavonic village-communities; and for the Teutons, see Tac. Germ. VII.; Caes. B. G. VI. 22, 23.

‡ Primitive Marriage, p. 229.

head of the family, may be found in every part of the world.* At this period, social organization is but one step removed from absolute and ferocious anarchy. "Mistrust, jealousy, secret ambushes, and implacable vengeances" characterize the mutual relations of these social aggregates of the first order. Hostility is the rule, and peace the exception. The repulsive forces are stronger and the cohesive forces weaker than at any subsequent period. The sympathetic feelings, whereby man is chiefly distinguished from the beasts are as yet unawakened; and the selfish desires which tend to maintain savage isolation are unchecked save by family affection, the most instinctive and originally the least generous of civilizing emotions.

The expansion of families into tribes and their coalescence into civic communities illustrates the formation of social aggregates of the second order. For a long time these higher aggregates retain conspicuous traces of their mode of composition, as in Greece and Rome, until increasing heterogeneity obliterates the original lines of demarcation; while new divisions spring up, resulting from the integration of like parts, as is seen in the guilds of mediæval Europe, and still better in the localization of industries which marks the present time.

The advance from the civic or rural † community to the nation — an aggregate of the third order — is best exemplified in the history of France, which, from a disorderly collection of independent baronies, has passed by well-defined transitions into a perfectly integral empire. The attainment of this stage is a cardinal event in social life, and an indispensable preliminary to a career of permanent progress. As hinted above, the premature overthrow of the Hellenic political system is mainly, if not solely, to be attributed to its very incomplete integration. An aggregate of the national type was in process of being formed by the extensive coalescence of maritime cities under the leadership of Athens, when the Peloponnesian war supervened, indicating the superiority of selfish autonomy, and showing by its

* Volney's View of the United States, p. 397; Phillipp on Jurisprudence, p. 207; C. Comte, Législation, Liv. III. c. 28; Arist., Eth. Nic. VIII. 14; Grote, H. G. III. 48–69; Gibbon (Paris ed.), III. 243; Vico, Scienza Nuova, Opere, Tom. IV. pp. 23, 35, 40.

† A rural community may be either an incipient civic community or a modification of the tribe.

result that the civilizing spirit of nationality was as yet too feeble to prevail.

It was first under the Roman dominion that national aggregation and the feeling of national solidarity were developed to something like completeness. By absorbing nearly all the petty communities then existing, and by gradually extending to their members the privileges of citizenship, the Roman Empire succeeded in dealing to the passion for autonomy a blow from which it has never recovered; while the enormous extent of the Empire, and its ethnic heterogeneity, imparted to the national spirit thus invoked a cosmopolitan character destined afterwards to be of great service to civilization. The influence of these circumstances upon the subsequent attitude of Christianity cannot be too strongly insisted upon. No human mind could have even conceived, much less have carried into execution, the idea of a universal religion, if the antique state of social isolation had not previously been brought to a close by universal empire. If Christianity had appeared four centuries earlier than it did, it would, like Buddhism, have assumed the garb of a local religious reformation. Or if it could have aimed at anything higher than this, its preaching would have fallen upon ears not ready to receive it. All the Oriental enthusiasm, all the Hellenic subtilty of Paul, could have effected nothing, had he visited Athens in the days of Plato and Diogenes. But the cosmopolitan element in Roman civilization was just that which Christianity most readily assimilated. From this happy concurrence of circumstances, there was formed upon the ruins of Paganism that religious organization which alone of all churches that have existed has earned the glorious name of Catholic. Disgusted at her high-handed proceedings in later times, historians have too frequently forgotten that the Roman Church, by co-ordinating the most vigorous and progressive elements of ancient life, has given to modern civilization both its ubiquity and its permanence. Had the Church perished along with the Empire, amid the general wreck of ancient institutions, it is difficult to see how European history could have been anything else than a repetition of Grecian history, save only in the extent of its geographical range. Whoever is disposed to doubt so emphatic an assertion will do well, not only to con-

sider the immeasurable inferiority of the Scandinavian religions, compared with early Christianity, but likewise duly to ponder the fact that the German conquerors of Rome had not advanced beyond the stage of tribal organization. On their aggregation into rural and civic bodies, the autonomous spirit would have acquired an ascendancy which it would have taken another more fortunate Athenian federation, or another absorbing Roman domination, thoroughly to destroy. Even as it was, it required all the immense power of the Church, unflinchingly exercised through many generations, to prevent European society from disintegrating into a mere collection of mutually repelling tribal communities. But the Church not only preserved the social results of Roman dominion, by hastening the consolidation of each embryonic nationality; it also, by its peculiar position as common arbiter between the different states, contributed to the formation of a new social aggregate of the highest order. The modern system of independent nationalities held in virtual federation — not by international codes, but by the possession of guiding principles of conduct more or less heartily reverenced by all — is the work of the Roman Church. Here, finally, we have reached a system whose structure bears in the highest degree the marks of permanence. It is sustained by the ever-deepening sentiments of cosmopolitan philanthropy and universal justice, — the most cohesive of social forces, as the spirit of local selfishness was the most disruptive.

Thus, throughout, we find the development of society corresponding in a remarkable degree to the development of organisms as a whole. By the special comparisons which have been instituted, the general theory of social evolution is illustrated while it is confirmed. As far as the inquiry has gone, — and it might be carried much further, — the claims of Mr. Spencer's law of organic life to be considered the law of history are thoroughly vindicated. As far as humanity is a manifestation of collective life, the law of its progress may be said to be determined. But to render the interpretation coextensive with the phenomena, another consideration must be brought forward. Our law of history, as it now stands, covers alike the phenomena of social and of organic life; and to it the differ-

ential element must be added, by virtue of which the one class of phenomena is distinguished from the other.

In the ancient family, as delineated by Mr. Maine, the separate existence of the individuals was almost submerged and lost in the corporate existence of the aggregate. Personal freedom was entirely unrecognized. The doctrine that each person has the exclusive right to be the arbiter of his own destiny, subject to no meddling interference from without, found no place on the statute books of ancient lawgivers. To family duties all individual rights were subjected. By a tie, religious no less than political, the members of the family were all held in allegiance to its oldest male representative. The father might expose his son in infancy, and when grown up might sell him as a slave, or put him to death for disobedience. And the wife was to an equal extent in the power of her husband, to whom she legally stood in the relation of a daughter, so that marriage was but the exchange of one form of servitude for another. No transfer of property was valid, unless the persons conducting it swore in the name of some ancestor, — dead ages ago, it might be; for so absolute was the authority of the *paterfamilias* that it could not be conceived of as departing from him at death, but must be exercised by him, through the medium of prescriptive ceremonial, over whole generations to come. Nothing, in short, was regulated by contract, but everything was determined by status.* And this is the fact which irretrievably demolishes the theory of a primitive social compact, advocated by Hobbes and Rousseau. The prevalence of this state of things, moreover, in the despotic empires of the East, is proof conclusive that those nations are nothing but immense tribes, or aggregates of the first order; and thus the theory of the overripe character of Oriental civilization meets its doom.

With the rise of higher aggregates, such as states, civic or imperial, this sinking of the individual in the corporate existence still for some time continued. The rights and duties of the individual were still unrecognized, save in so far as they followed from the status in which he happened to be placed. In

* "Status est qualitas cujus ratione homines diverso jure utuntur. . . . . Alio jure utitur liber homo; alio servus; alio civis; alio peregrinus." Heineccii Recitationes, Lib. I. tit. 3.

republican Rome, and in the Hellenic communities, the welfare of the citizen was universally postponed to the welfare of the state. But circumstances too complicated to be here detailed, of which the chief symptom was the increasing importance assigned by Roman jurisprudence to contracts, resulted, at an advanced period of the empire, in the more or less complete recognition of individual rights and obligations. On the rise of the feudal system, the relations of vassal to suzerain were, through the influence of Roman conceptions, extensively regulated by contract; and it is in this respect that the feudal institutions are most widely distinguished "from the unadulterated usages of primitive races." * It was, I believe, mainly owing to this that the integration of feudal sovereignties was accompanied by the enlargement of individual liberty to a much greater extent than the integration of ancient gentes and phratries. The Roman Church also aided in promoting the freedom of individuals, as well as in facilitating the consolidation of states. By the strict enforcement of celibacy, it maintained in the midst of hereditary aristocracy a comparatively democratic organization, where advancement usually depended upon moral excellence or intellectual ability. And preserving, by the same admirable institution, its independence of feudal patronage, it was often enabled successfully to interpose between the tyranny of kings and the helplessness of subjects. The development of industry, crossing in various ways the antique divisions of society, has contributed to the same result; until, in modern times, the primitive mode of organization is almost entirely effaced, leaving perhaps no other vestige than the legal disqualifications of women. Individual rights and obligations, from being nothing, have come to be all in all.

It will thus be seen that the very same process, which has resulted in the formation of social aggregates of a higher and higher order, has also resulted in the more and more complete subordination of the requirements of the aggregate to the requirements of the individual. And be it further noticed, that the sentiment of universal philanthropy and universal justice, which maintains the stability of the highest social aggregation, maintains also to the fullest extent the independence of its in-

* Maine, p. 365.

dividual members; while the selfishness, which in early times prevented the existence of any higher organization than the family, was also incompatible with individual freedom. This is the exact reverse of the state of things which we find in organic evolution. In organic development, individual life is more and more submerged in corporate life. In social development, corporate life is more and more subordinated to individual life. The highest organic life is that in which the units have the least possible freedom. The highest social life is that in which the units have the greatest possible freedom.

Thus we have at last reached the conclusion in quest of which we set out. Supplementing the previous formula, in which organic and social life were seen to agree, by our present formula, in which they are seen to differ, we obtain the fundamental law to which social changes conform. The result, it will be seen, is the reverse of that reached by Comte, whose ultimate state of society is one in which individual liberty no more exists than it does in the cells of a vertebrate animal. Nor does it interpret progress as the necessary consequence of an inherent tendency, but it recognizes it as determined by complex conditions, which must all be fulfilled before it can be realized. And lastly, by practically showing that historic phenomena can be reduced to orderly sequence, it confirms the result which I have sought elsewhere (*Fortnightly Review*, September, 1868) to demonstrate independently, that social changes, as well as physical changes, are within the sphere of immutable law, concerning which Hooker has said, with no less truth than sublimity, that "her seat is the bosom of God, and her voice the harmony of the world."

JOHN FISKE.

ART. VIII. — 1. *Vesuvius.* By JOHN PHILLIPS, M. A. Oxford. 1869. 12mo.

2. *Histoire Complète de la grande Éruption de Vésuve de* 1631. Par H. LE HON. Bruxelles. 1866. 8vo.

3. *Reise der Oesterreichischen Fregatte Novara um die Erde in den Jahren* 1857, 1858, 1859. Geologischer Theil, Erster Band, Erste Abtheilung, Geologie von Neu-Seeland. Von DR. FERDINAND VON HOCHSTETTER. Wien. 1864. 4to.

4. *Voyage Géologique dans les Républiques de Guatemala et San Salvador.* Par MM. A. DOLLFUS et E. DE MONT-SERRAT. Paris. 1868. 4to.

5. *The Natural System of the Volcanic Rocks.* By BARON F. RICHTHOFEN. Extracted from the Memoirs of the California Academy of Sciences. San Francisco. 1868. Pamphlet.

WE have placed at the head of this article the titles of a few of the many volumes devoted chiefly to the subject of volcanoes which have issued from the press during the past few years. To give a complete list of the volumes and papers in which the phenomena of volcanism have been described and discussed, even if only the productions of the last five years were to be included in it, would require many pages. On the subject of the volcanic island of Santorin alone, at least six different works were published during the year 1868. One author, Le Hon, gave, in 1866, a complete history of an eruption of Vesuvius which took place two hundred and thirty-eight years ago; while several other writers, some of them known as geological authors and others not, have taken advantage of the recent period of activity of that interesting volcano to serve up portions of the mass of the old material in a new form, adding in some cases new facts of value to the previously existing stock, but generally relying for their chances of success rather on elegance of typography, or other extrinsic circumstances, than on scientific accuracy or originality of ideas. The reason of the exceptional activity in this department of book-making is partly that the volcanoes themselves — at least several of those best known — have been unusually active, and partly because the fashion of illustrated and sen-

sational books on scientific subjects has been set, and of all the subjects which geology presents there is none which so excites the popular mind as the phenomena of volcanoes and earthquakes.

Earthquakes are events simply fearful; there is nothing about them which is not appalling in its nature. They come without warning, and leave nothing but dismay and ruin behind. Even the minor shocks are terrible, and more alarming in proportion to the number of times they have been experienced. It is only in California that an attempt has been made to pooh-pooh an earthquake; but even there the hollowness of the derision was but too evident. In an earthquake-shaken country the time that elapses between the instant when one perceives that an earthquake wave is approaching and that when its first effect is felt is one into which a thousand apprehensions can be crowded. Then, if ever, one feels the utter insignificance of man as an integral part of creation. The blow may fall lightly and leave no sensible trace behind; or, on the other hand, it may crush and overwhelm. The regulating screws of the horrid machinery are invisible. There is no reason why one should await with more calmness the approach of an earthquake shock than, with his head on the anvil, the falling of a steam-hammer, not knowing beforehand at what point the ponderous mass is to be arrested by the engineer in charge of the machine.

Volcanoes, on the other hand, give in almost all cases some previous warnings of their intention to change their usual quiescent state for one of destructive activity. Their disastrous effects can often be to a large extent avoided by flight. It is only very rarely that an eruption is so sudden and violent as to overwhelm and destroy without previous and oft-repeated warnings. Again, eruptive volcanic action is usually prolonged over many days or weeks, or even months, and the phenomena exhibited are usually — if the eruption is on a large scale — of surpassing grandeur, from a picturesque as well as from a scientific point of view. Perhaps there is no scene offered by any play of nature's forces so wonderfully attractive as that of a great volcanic eruption, especially when seen by night. The combination of every conceivable element of the picturesque

and the sublime afforded by the great outbreaks of Kilauea, as reported by the few who have had the good luck to witness some of them, may be mentioned as an instance in point.

No wonder, then, that the subject of volcanoes has always been an attractive one to the general, as well as to the scientific, traveller and writer, and that such a great number of volumes have been published, and are still publishing, treating either of volcanoes in general or of particular eruptions or periods of eruptive activity. The work of the veteran Oxford professor, John Phillips, the title of which is placed at the head of the list preceding this article, is one of the most noticeable of those possessing a somewhat popular character. Within the limits of three hundred and fifty pages it gives a succinct history of Vesuvius and of the adjacent volcanic region so much visited by travellers, and is on all points exact and clear. The illustrations of the volume are numerous and effective, although not elaborate, and very far from sensational. The book is exactly what was desirable as a guide to travellers of scientific tastes, and may be consulted with profit and pleasure by the professional geologist. It contains, besides, a catalogue of Vesuvian minerals. There is also a chapter devoted to the theory of "volcanic excitement," — a subject on which much has been written, especially of late, but in regard to which it must be admitted that we have still much to learn.

The work of M. Le Hon, placed second on our list, is especially valuable as containing a large map, which appears to have been carefully constructed, and which exhibits all the flows of lava from Vesuvius between the years 1631 and 1861. This is the only map which professes to give with any approach to exactness the position of these masses, and evidently it could not have been produced without considerable labor and without numerous excavations. The description of the eruption of 1631 is carefully compiled, and gives a good idea of this the most devastating of all the modern outbreaks of Vesuvius. By this eruption it is probable that at least four thousand persons lost their lives in various ways, while more than forty towns and villages were destroyed, the pecuniary

losses being estimated at twenty millions of ducats, — an enormous sum at that time.

The volcanic phenomena of a far distant but exceedingly interesting region — New Zealand — are brought to our notice for the first time in a comprehensive manner by Dr. Hochstetter, in two separate works, — one, in royal 8vo. form, of a popular character, entitled simply "Neu-Seeland"; the other, a volume of the series published by the Austrian government as the official account of the voyage of the frigate Novara, made in the years 1857–59. The first-mentioned work was published by Cotta, in 1863, with every luxury of adornment, and is one of the most attractive books — half scientific and half narrative — ever issued. The quarto official volume is also beautifully printed and illustrated, and is largely devoted to a description of the New Zealand volcanoes, as well as of the wonderful geysers, hot-springs, and solfataras which form so peculiar and attractive a feature of the island, and which are admirably represented in the chromo-steel plates of the popular volume and the chromo-lithographs of the other. These indicate a type of geological scenery resembling that of the geysers of Iceland, but on a grander scale, and with the peculiar added beauty of a wonderfully interesting and abundant vegetation. Dr. Hochstetter's books are rich in information about a new and remarkable region, but they are very little encumbered with generalities or theoretical views.

Almost equally magnificent in its typography and style of publication is the work placed fourth on our list, — an official publication of the French government, issued from the *Imprimerie Impériale*, as an instalment of the results of the scientific mission instituted by the Emperor for exploring Mexico at the time when his unfortunate military expedition to that country was planned. In carrying out this exploration, MM. Dollfus and Mont-Serrat — neither of them a geologist of reputation — spent a little over two years in that region, eight months of it in Central America. The results of their investigations have been laid before the public in the form of a ponderous quarto, in which, as in many other works of French savans which treat of the geology of parts of our continent, there is but little that is new, while, on the other hand, it con-

tains many blunders. The Emperor has been unfortunate in the representatives of geological science whom he has sent to the American continent. M. Laur, who visited California some ten years ago, and made a report on its mines, showed a remarkable tact for misapprehending the plainest and most important facts, and drawing erroneous conclusions; as, for instance, when he announced that the yield of the Comstock Lode would never exceed three millions of dollars a year, whereas, in reality, it soon after reached twelve millions. About half of the volume of MM. Dollfus and Mont-Serrat is taken up with remarks on the volcanoes of Central America, and it is astonishing how little there is of original and valuable matter to be found in it. One is more annoyed still, on examining the beautifully engraved illustrations, to find that they bear evident marks of the sensational style; the slopes of the cones are all enormously exaggerated, and no data are given by which these errors can be corrected. A few simple outlines plotted from actual measurements would have been worth more than the whole dozen and a half of costly steel plates which are given, the style of which takes us back to the dark ages of the illustrations to Humboldt's "New Spain." One should compare them with the drawings and sections illustrating M. Hartung's books on the Azores, Madeira, and Porto Santo, to see the difference between fancy and real work.

Baron Richthofen's quarto pamphlet of a little less than a hundred pages, with no illustrations, is entirely different from most of the works already cited, since it addresses itself exclusively to the professional geologist. It is the result of long observation and of much study bestowed on the volcanic rocks by an able and experienced observer in different parts of the world. In it many of the most difficult points in the theory of volcanoes are discussed in such a manner as to make its study imperative on all who desire to form an original opinion in regard to the subjects with which it deals. We shall refer to it further on, or at a future time, when the theory of volcanoes and earthquakes is under discussion.

In a previous article we endeavored to give a systematic view of the present condition of our knowledge of earthquake phenomena, so far as their external manifestations are con-

cerned. We discussed the data of the earthquake catalogues with reference to the geographical distribution of seismic areas, to the relations of time of earthquake shocks, and to their connection with movements and conditions of the atmosphere. We had occasion to refer more than once to the relations between volcanoes and earthquakes both in time and space, and thus prepared the way for a discussion of the causes of these truly wonderful and most closely connected phenomena.

Before entering on this discussion, however, we must become more fully acquainted with the facts concerning volcanoes, and it is with these that this article will be occupied, leaving for a third and final one of the series, an attempt to show how far science is able, at the present day, to throw light on those workings of unseen forces which are manifested in the earthquake shock, the volcanic eruption, the rising and falling of the land, and the formation of mountain chains, — for all these are effects of one and the same cause, or, at least, of one set of causes so intimately allied with each other that the discussion of any one of them must necessarily include that of all the others.

In pursuance of this plan, then, we purpose, in this article, to give an outline of what is known in regard to volcanoes, having reference chiefly to their external manifestations, such as form, geographical distribution, and their different phases of repose and action. This will prepare the way for us to get some idea of the nature of the forces at work below; for a volcano is a sort of happy accident, which lets us into some of nature's secrets, — a peep-hole through which we may get a glimpse of the interior of the earth. It is evident that, if a great smelting establishment were buried so that no part of it should be visible except the top of the tall chimney, from which gases were issuing, and some piles of slags accumulated on the outside, and we had to report on the nature of the processes going on below from these imperfect data, the investigation would require no little scientific knowledge and ingenuity, and probably some time would elapse before a guess could be hazarded as to the character of the work of which these gaseous exhalations and slags were the only tangible result. So it is with volcanoes: we collect and analyze their products, whether solid, fluid, or

gaseous; we note the times and places of these manifestations of the internal forces and their correlations with other natural phenomena; we avail ourselves of every conceivable source of information touching the subject, and reason to the best of our ability on the whole mass of evidence thus obtained. And yet the result, it must be confessed, is far from satisfactory. There are many obscure points in the theory of volcanoes and earthquakes; and if the general cause of the phenomena of volcanism is in the opinion of most geologists correctly determined, yet in regard to the precise mode of operation of the internal forces there is great discrepancy of opinion, even among those who have devoted most time to this branch of inquiry.

A volcano is a mountain, hill, or area of the earth's surface, connected with some more or less deeply seated portion of the interior by a canal or passage, through which solid or gaseous materials are brought to the surface. It is almost invariably the case that the substances thus ejected are intensely hot, the rocky material often pouring forth in a condition of igneous fluidity, and the term "lava" is applied to anything which has flowed in this way and which in cooling consolidates into rock. Elevations which would, according to the definition just given, be included under the head of volcanoes, but which emit only water with paroxysmal violence, are usually called "geysers." These are rare and on a small scale as compared with proper volcanoes. Orifices from which mud is thrown out, called "mud-volcanoes," are not uncommon, but are usually of small dimensions, and the temperature of the substances they eject is in many instances raised but little above their ordinary temperature.

Volcanoes are called "active" if they have within a comparatively recent period given indications of eruptive action. The term "dormant" may be used to designate that peculiar condition when the internal forces have remained quiet for a great length of time, so that only faint traces of activity are still visible; and if all chemical action has ceased, and there is no record in history of any outbreak, the volcano or volcanic region is considered and called "extinct." Yet it is not an easy thing to draw the line between dormant and extinct volcanoes.

Thus Epomeo, on the island of Ischia, remained entirely inactive for seventeen hundred years. So Vesuvius was never known in history as an active volcano until A. D. 79. A great saucer-like depression, overgrown with wild grapes, in which Spartacus once camped with ten thousand men, marked the position of its crater, and Herculaneum and Pompeii were two populous towns at its base. By the well-known eruption of that year, these two towns were overwhelmed, — greatly to the inconvenience of their inhabitants, no doubt, but immensely to our advantage, — the whole adjacent region devastated, and the mountain built up into an entirely different shape from that which it had had before. From this time on, the eruptions continued, without any long periods of repose between them, until the fourteenth century, after which there was quiet for nearly three hundred years. During this period of repose the crater became filled anew with a forest vegetation, and only a couple of hot-springs gave evidence of the forces slumbering beneath. All of a sudden, again, in 1631, a furious eruption took place, and seven streams of lava flowed down the slopes of the mountain at one time. Since that, Vesuvius has almost always been uneasy, there being rarely an interval of rest of more than ten years, and, of late, the eruptions have been very violent and frequent. The Gunung Gelungung, one of the great volcanoes of Java, was, and had been from time immemorial, perfectly quiescent, and the site of the present crater was a broad valley, the inhabitants of which had never dreamed of anything but the most peaceful security. But suddenly, in the middle of a fine day in October, 1822, they received notice to quit, in the form of a violent explosion beneath their feet, which proved to be the commencement of one of the most fearfully destructive volcanic eruptions on record.

There are but few volcanoes which are permanently active, and those which are thus in constant eruption are usually far from violent. Paroxysmal, powerful action occurs only occasionally, sometimes recurring, after short intervals, then slackening and perhaps ceasing altogether, or, after a long period of repose, say hundreds or perhaps thousands of years, beginning again.

We have in the moon the best possible specimen of thor-

oughly played out volcanism. The most careful watching of the surface with powerful telescopes seems, thus far, to have failed to reveal any evidence of changes taking place there. And since there is neither water nor air to produce erosion or disintegration of the volcanic surface, it seems pretty clear that it will remain as it now is for an indefinite length of time.

In dividing terrestrial volcanoes into extinct, dormant, and active, it must be understood, then, that these terms are used to express our general opinion with regard to their condition, based on a variety of circumstances, and not as indicating any positively established criterion by which the different classes can be distinguished from each other. We speak of the volcanic region of Central France, as "extinct," because we know that a long time has elapsed since any indications of activity have occurred there; this has been ascertained by studying the amount of erosion which has taken place in the lava currents and in other ways. Yet the pouring out of a portion, at least, of the vast mass of volcanic material there visible took place, in all probability, after the appearance of man on the earth, although at an epoch immensely remote as compared with historical time. Neither can any conclusive reason be given why volcanic activity should not again manifest itself in this region.

A volcano may be considered as only dormant, and not extinct, when in the so-called "solfataric condition." This name is derived from the Solfatara, near Naples, where there has been no eruption since 1198, but where vapors and gases are constantly issuing from the region of the old crater. These vapors consist mainly of steam, mixed to some extent with sulphuretted hydrogen, and also with sulphurous acid, chlorohydric acid, carbonic acid, and nitrogen gases. The abundance of the sulphuretted hydrogen is usually testified to by the deposits of sulphur, so often met with in the craters of old volcanoes, and undoubtedly formed by the decomposition of this gas; besides, the nose has no difficulty, if no satisfaction, in detecting its presence. Steam and sulphuretted hydrogen usually predominate largely among the products of solfataric action. The other gases mentioned generally, but not always, occur in smaller quantity. Boracic acid, petroleum,

specular iron, chlorides of the alkalies, realgar, and orpiment are also occasionally observed among the gaseous emanations in old volcanic regions. Some observers testify to the existence of inflammable gases in sufficient quantities to produce flames, these gases being hydrogen and sulphuretted hydrogen; but there are other observers, equally distinguished, who have had frequent opportunities to examine volcanoes, both in action and at rest, and who have never seen any indication of flame. What is generally called fire, in eruptions, is, of course, simply the light or the reflection of the lava, which is intensely heated but not actually undergoing combustion.

During the solfataric condition of a volcano, its crater becomes blocked up with congealed lava, perhaps overgrown with forests and dense vegetation, and the signs of activity die out, until, as the last relic of former life, only a thermal spring may be found here and there, — an indication of the mighty forces slumbering beneath. Such is the present condition of nearly all the great volcanic cones on our own coast, from Arizona to Oregon.

Midway between the conditions of solfataric repose and of paroxysmal violence is another stage of activity, in which some volcanoes remain during long periods, while a few appear never to pass out of it into more violent action; others, however, remain in this condition of partial repose during the intervals between violent outbursts. At such times the crater and the channel connecting it with the interior remain open, and the lava can be seen in them maintaining a mobile condition, while occasional explosions of the surface of the melted mass take place, fragments of slag and cinders being thrown up and mostly falling back into the abyss from which they were hurled. This was the condition of Vesuvius when visited by the writer in November, 1843. At that time there had been no eruption of lava overflowing the lip of the crater since 1839, when the cavity was cleaned out, and left as a funnel three hundred feet deep, accessible to the bottom. From this time a smaller cone began to grow inside the large one, and in 1843 it was about fifty feet high, and could be reached by clambering down the walls of the old crater, the whole bottom

of which, around the foot of the new cone, was covered with lava, which was red-hot a few inches beneath the surface, but could in most places be safely walked on. From the vent a shower of cinders was thrown up every fifteen or twenty minutes; and although it was possible to climb to the summit of the cone on the windward side, with occasional calls for skill in dodging the projectiles, the orifice was too much occupied with ascending vapors to permit of anything below being clearly seen. This interior cone kept on growing by additions made to it from the falling materials, and finally, in 1847, the crater became filled, and the lava overflowed, running down on three sides at once. From that time forward Vesuvius became very uneasy, and finally a great eruption took place in 1850. This lasted about twenty days, and when it was over the summit of the mountain was left much changed in form, the old walls having been broken down, the central cone reduced in size, and a new crater formed, about two miles in circumference, and a hundred and fifty feet deep. The volcano then remained quiet from 1850 to 1855, when it became very active; again a grand eruption occurred in 1858, and slight ones in 1860 and 1861. Since the last-named year Vesuvius has rarely been at rest. During the winter of 1867 – 68 there was a great outburst of volcanic force, which lasted several months.

In the condition of half-repose just noticed as not uncommon between intervals of paroxysmal activity, observers are able to look down into the throat or channel of Etna, as well as of Stromboli, during the periods of repose between the eruptions, which take place with great regularity every ten or fifteen minutes. At such times the lava is seen to move up and down in the chimney; as it rises, its surface swells up into a great blister, which finally gives way to the tension exerted and explodes with a loud noise, the fragments being scattered and thrown up with great force; the column of melted matter then sinks back into temporary repose, and rises again after an interval of a few minutes. The same phenomena were observed on Sangay, one of the Quito group, a permanently half-active volcano, like Stromboli.

The most gigantic exhibition of this condition of the volcanic forces is to be seen in Kilauea during its quiet periods, when

the crater, which is three miles in its greatest diameter, has in it large pools of boiling and extremely fluid lava, which is continually thrown up in jets of from thirty to forty feet in height, that fall back into the pool before they have time to cool. These lakes of liquid fire vary in size according as the volcano is more or less active, and sometimes cover the whole area of the crater, the wind raising the surface in waves of molten rock, which dash against the encircling walls with an indescribably grand effect. The greater the liquidity of the lava, the less the force with which it is thrown up, for the jets of imprisoned vapors do not have time, in a very fluid material, to accumulate sufficient pressure to act with extreme explosive violence.

The phenomena which, we have seen, thus characterize the semi-active condition of volcanic activity are, in most respects, similar to those of the fully active state, differing rather in the degree of violence with which they are manifested than in kind. It seems, indeed, that the longer and more complete the repose of the volcano has been, the more violent its action when it once breaks out again. This is natural, for the resistance to an outburst must, as an ordinary thing, go on increasing the longer the vent remains stopped, and when this resistance is finally overcome the magnitude of the eruption will be proportionate to the force required to clear the way. The first recorded eruption of Vesuvius was the most violent of any which are known to have taken place; next to this in its destructive effects was that of 1631, occurring, as it did, after several hundred years of entire repose.

In regard to the precursors of a violent eruption, or the symptoms by which the approach of one may be detected, there is much uncertainty. It may be said, however, that a great outbreak is to be expected when the internal forces begin to show signs of uneasiness and the usual phenomena of half-repose to be intensified in their action. It seems a well-authenticated fact, that previous to an eruption of Vesuvius the wells and springs adjacent to the mountain begin to dry up. When volcanic cones are covered with snow it is not uncommon for the eruptions to be preceded by devastating floods, caused by its melting, the natural result of the gradual warming up of the mountain mass.

The following are the ordinary phenomena of violent eruptions: an appearance of fire; lightning; subterraneous noises, or thunder; ejection of ashes, cinders, or blocks of lava; the pouring out of melted lava; and, in connection with earthquake shocks, fissures in the earth and permanent changes in the level of the adjacent country.

Great volcanic paroxysms are often preceded by more or less violent earthquake shocks, which are both frequent and prolonged, but usually limited to the mass of the volcano itself or its immediate vicinity. Tremendous underground detonations are heard, sounding like the firing of heavy cannon or repeated volleys of musketry. These sounds are heard at all points at the same instant of time, showing that they are propagated through the crust of the earth and also that they come from a great distance beneath the surface. These explosive sounds have been heard simultaneously over areas of many thousand square miles. Thus the noise of the outbreak of the eruption of Temboro, on the island of Sumbawa, was heard all over Java, and everywhere supposed to come from some point in the immediate vicinity. It was distinctly audible at points two thousand miles apart. As the shocks and sounds continue, people become more and more alarmed and excited, and imagine that they see every kind of portent in the sky or in the conduct of animals. It is generally thought that an oppressive stillness pervades the atmosphere just before the moment of the great outbreak, and that dogs, swine, and geese exhibit peculiar indications of fear. How much reliance can be placed on the statements of the sensitiveness of animals to impending catastrophes, it is not easy to say; but it is evident that the circumstances of a great eruption are eminently favorable to a highly imaginative condition of the mental faculties.

The earthquake shocks preceding volcanic outbreaks take place while the internal conflict is going on between the imprisoned lava, seeking to find a vent, and the resistance offered by the weight and tenacity of the superincumbent crust. When the internal pressure which seeks relief in bringing up to the surface the material on which it is acting at last has its own way, the explosion is tremendous, the mass of the volcano

being shaken to its very foundations. As soon as the channel of communication with the interior is opened, which channel usually communicates with the bottom of the old crater, although not unfrequently opened through some new side fissure, the pent-up vapors and gases begin to escape with tremendous force, carrying up in the air, torn into fragments, rocky masses, which then fall and are thrown out again repeatedly, and thus, by friction against each other or by actual explosion, through sudden changes of temperature, are rapidly reduced to powder and carried off with the gases or vapors which rise from the chimney of the crater.

The ejection of vapor and ashes, as the comminuted fragments of lava are called, is thus described by Scropè, who was an eye-witness of one of the grandest eruptions of Vesuvius, — that of 1822. He says: "The rise of the vapor produces the appearance of a column several thousand feet high, based on the edges of the crater, and appearing from a distance to consist of a mass of innumerable globular clouds of extreme whiteness, resembling vast balls of cotton rolling one over the other as they ascend, impelled by the pressure of fresh supplies incessantly urged upwards by the continued explosions. At a certain height this column dilates horizontally, and — unless driven in any particular direction by aerial currents — spreads on all sides into a dark and turbid circular cloud. In very favorable atmospheric circumstances, the cloud with the supporting column has the figure of an immense umbrella, or of the Italian pine, to which Pliny the younger compared that of the eruption of Vesuvius in A. D. 79, and which was accurately reproduced in October, 1822. Strongly contrasting with this pillar of white vapor-puffs is seen a continued jet of black cinders, stones, and ashes, the larger and heavier fragments falling back visibly after describing a parabolic curve. This jet of solid fragmentary matter often reaches a height of several thousand feet, while the vapor pillar rises still higher. Forked lightnings of great vividness and beauty are continually darted from different parts of the cloud, but principally its borders. The continual increase of the overhanging cloud soon hides the light of day from the districts situated below it, and the gradual precipitation of the sand and ashes it contains contributes

to envelope the atmosphere in gloom, and adds to the consternation of the inhabitants of the vicinity."

If the volcano is one which emits lava, this rises gradually in the crater and finally overflows it at the lowest point, unless it succeeds in forcing its way through some side fissure. The molten mass finds its way down the declivity with a rapidity proportioned to its fluidity, overwhelming and destroying everything which it encounters. Clouds of vapor rise from the flowing mass, visible during the day, the exterior soon becoming covered with a dark crust of scoriæ, occasional fissures in which reveal, especially at night, the presence of the intensely ignited material beneath. The flow of lava from the volcanic vent indicates that the crisis of the disturbance is passed, and that there will thenceforth be a gradual slackening in the violence of the eruptive action.

Not a few volcanoes, however, never send out lava, but only ashes and cinders; these are usually the very large ones, as, for instance, the great cones of South America. It is also true that large volcanoes are less frequently than smaller ones the seat of great disturbances. The frequency of the eruption seems to be, in a measure, in inverse proportion to the height of the volcanic cones from which they proceed. Thus the lofty volcanoes of South America have rarely had more than one eruption each in a century; the Peak of Teneriffe had only three between 1430 and 1798. This is very natural, since the higher the cone the greater the resistance offered to an outbreak by the weight of the column. But the rule is not of universal application. Closely connected with the last-mentioned fact is another, previously suggested, namely, that the most fearful eruptions may be expected to occur after long intervals of repose. Both circumstances indicate very clearly the accumulation of force necessary to overcome increased resistance.

At night the column of vapor and ejected solid material appears red, not because it is actually a column of flame, but partly because it is illuminated by the reflection from the red-hot lava below, and also because the fragments carried up in it are themselves intensely heated. The fact that the column remains perpendicular all the time is a proof that it is not a

flame, for, if that were the case, it would be swayed by the wind; but one of the most characteristic features of an eruption is, that the pillar of fire seems to stand immovable amid the "wreck of matter" around it.

The electrical phenomena of a great eruption are extremely interesting. The upward rush of heated vapor gives rise to furious disturbances in the condition of the atmosphere, as is also the case, on a small scale, when steam escapes from an ordinary boiler through the safety-valve. A constant play of lightning goes on around the ascending column, and the noise of the thunder is mingled with the crash of the projected fragments of rock. Tremendous bursts of rain, or even hail, often occur at the same time, and from the same cause, — namely, the electrical disturbance of the atmosphere, — and the effect of the torrents of water rushing down the sides of the volcano is often more devastating than that of the lava itself.

The mass of ashes, scoriæ, or cinders thrown out in some volcanic eruptions is prodigious. In that of Vesuvius, in 1794, four cones were formed on a fissure nearly half a mile long, each with its separate crater, throwing up showers of red-hot cinders in such rapid succession as to appear like one continuous sheet of fire in the air. These showers really consisted of semi-fluid lava, which expanded in the air like soft paste. This continued for several days, so that the whole space above the crater seemed to be filled with the fragments, which formed a column a mile in circumference and rose to an immense height, then spread out, and seemed to cover a much greater area than the base of the mountain itself. Generally, however, these ejections of cinders are intermittent in character, sometimes following each other in rapid puffs, at others occurring as a succession of explosions at longer intervals.

The size of the fragments thus ejected is variable; often they are as fine as the finest dust, but sometimes the lava is thrown out in great masses. Thus Cotopaxi vomited forth, in 1533, blocks of rock ten feet or more in diameter. The so-called volcanic bombs shelled out by Vesuvius are usually from the size of the fist to that of the head. Generally they are irregularly rounded or pear-shaped; but in volcanoes in which the

lava is very liquid it comes down in masses which flatten out into cakes when they strike the ground. The finer fragments which in prodigious quantity accompany the larger, and usually vary from the size of a pea to that of a walnut, are now almost everywhere known by the Italian name of *lapilli*, or *rapilli*. The finer, sand-like material is called *puzzolana*, and the finest of all *ceneri*, or ashes.

One of the most curious features of the eruptions of some volcanoes is the prodigious number of small but perfectly formed crystals which are thrown out among the materials shot up from below. Vesuvius, which is a perfect treasure-chamber of interesting minerals, — while most of the American volcanoes are miserably provided in this way, — has furnished at times showers of beautiful crystals of augite, leucite, mica, and black garnet, the first-named being the most abundant. They seem to have existed ready formed in the semi-fluid lava, or else to have crystallized out suddenly at the moment of its solidification; which of these suppositions is the correct one is not thoroughly settled, although the first seems by far the most probable.

Vast masses of volcanic breccia occur in regions of eruptive rock, as for instance in California, where beds hundreds of feet in thickness are found covering many square miles of area, entirely made up of angular fragments of lava, of all sizes, which have evidently been ejected in the form in which we now see them. The explosions with which volcanic eruptions begin after long periods of tranquillity, and which sometimes pulverize the whole summit of the mountain mass in which they occur, give rise to prodigious accumulations of these broken masses of rock. The great eruption of Ararat, in 1840, was of this kind, a terrific explosion having torn open the side of the mountain and thrown off an immense mass of fragments, which were projected for miles in every direction, completely burying the town of Arguré. There was no eruption of lava; but frightful earthquakes and torrents of rain followed, washing down the detritus of the explosion in immense floods of mud, which were quite as destructive as lava would have been.

According to Junghuhn, the Javanese volcanoes now emit no lava, but only give rise to streams of brecciated material, which

have issued from the craters in that condition. The same author also gives a most interesting account of the great eruption of Pepandayan, which took place in 1772. At that time such a mass of fragments and blocks of lava was ejected that the upper part of the Garut valley, for ten miles in length, was filled with ashes and angular materials to the average depth of fifty feet, while in places the great blocks were heaped up in conical hills as much as a hundred feet in height. The distances to which such masses are thrown indicate the immensity of the force by which they are hurled into the air. Cotopaxi, for instance, in 1533, threw rocks from eight to ten feet in diameter to a distance of seven miles. The maximum height to which masses of lava have been thrown by Etna and Vesuvius, in different eruptions, is given by various scientific observers as from seven to ten thousand feet.

Towards the end of an eruption the ashes ejected grow finer and whiter, bearing all the marks of having been longer subjected to the triturating process by which the lava is reduced to powder. This is the natural result of the slacking off of the ejecting forces, the sinking down of the column in the chimney, and the consequent longer time that the materials are exposed to friction against each other. Some observers have thought, however, that the lava might in many cases be blown into fine powder by the sudden expansion into steam of the water it contained, at the moment the pressure was removed by its issuing from the crater, and there are some appearances which seem to render this view a probable one.

The finer the ashes thus ejected, the farther away from the volcano they fall. Carried by the wind, they are sometimes spread over vast areas of country, and the exceeding fineness of the material is testified to by the slowness with which it descends, sometimes filling the air so completely that the darkness of night reigns for days in succession. It is stated that, in the great eruption which devastated the island of St. Vincent in 1812, the fall of ashes on the island of Barbadoes, nearly a hundred miles distant, caused so profound an obscurity that a white handkerchief was invisible at five inches from the eye. The fall of ashes in the great eruption of Temboro, in Sumbawa, in 1815, produced so dense a cloud that it

was dark as night over the islands of Java and Celebes. Ashes fell on the islands of Sumatra, Banda, and Amboyna. West of Sumatra a layer of lapilli, two feet in thickness, floated on the sea, so that ships had difficulty in forcing their way through. A careful comparison of all the data, by Zollinger, led him to the conclusion that the ashes fell over an area of nearly one million of square miles, and that fully fifty cubic miles of material was ejected in this one eruption. Junghuhn, also, calculated the volume of the ejected materials of the same eruption to be one hundred and eighty-five times the dimensions of Vesuvius. The area over which daylight was shut off by this fall of ashes was nine hundred by seven hundred miles in extent, — that is, equal to the whole space in our own territory between the Mississippi River and the Atlantic Ocean. Coseguina, in 1835, covered with its falling ashes an area of nearly one thousand two hundred miles in diameter.

The destructive effects of these showers of ashes are fearfully increased by the torrents of rain which frequently fall in connection with great eruptions; these carry down the ejected materials in the form of great flows of mud, which descend the steep slopes with such velocity that they cannot be avoided, and of course completely overwhelm everything they reach. It was by such a *lava d'acqua*, or water-lava, as the Neapolitans call it, that Herculaneum and Pompeii were submerged and destroyed. For eight days and nights the torrents of mud poured down over those ill-fated towns, accumulating in places to the depth of over a hundred feet. It was the remarkable way in which these cities were overwhelmed that has preserved them so wonderfully for the inspection of people for almost two thousand years. There is no other possible manner in which they could have been thus hermetically sealed up, as it were, all the walls remaining standing, and everything in its place. Had a shower of ashes, for instance, fallen from above, all the buildings would have been crushed in; but the insidious mud-flow crept into everything, filling rooms, and even cellars, so gradually that nothing was disturbed or displaced. Herculaneum was afterwards covered with a layer of solid lava, and then built upon, so that the opening of that town has been much slower and more expensive; although, in proportion to

the amount of space uncovered, more interesting and valuable works of art have been disinterred than in Pompeii.

When these showers of ashes fall into the ocean, they gradually sink to the bottom, where they must eventually become consolidated into rock, which may be raised again to the surface in the course of the changes which are continually going on in the relative positions of sea and land. Thus are formed very extensive masses of stratified rock, which are at the same time both eruptive and sedimentary, or Pluto-Neptunean, as they have sometimes been called, as belonging to the two domains of the mythological rulers of the realms of fire and water.

It is by the constant addition made to their exterior by the falling masses of lava, ashes, and lapilli, that the cones of volcanoes are built up, — not only the dominating one of each volcano, but the secondary or minor ones, which are sometimes very numerous. These smaller cones form on the fissures which open frequently in the main cone, and which connect with the seat of action in the chimney of the volcano, just as that is connected with a still larger eruptive mass deep in the interior of the earth. Etna has more than seven hundred of these smaller cones around its base, some of which attain respectable dimensions, one reaching seven hundred feet in height, and another four hundred or more. On Vesuvius a fissure opened, in 1794, about nine hundred feet below the summit; this was two thirds of a mile in length, and eight new craters, with cones of scoriæ, were formed upon it.

Besides ashes and scoriæ, we expect, in most volcanic eruptions, to see rock rendered fluid by heat issuing from the crater, and it is to this molten rock that the name of lava is properly applied. The volcanic bombs, lapilli, and ashes are of course not fluid when ejected, although some of the larger masses sometimes reach the ground in a semi-plastic condition, so as to flatten themselves out into a sort of cake, as before mentioned. Different volcanoes and volcanic regions differ greatly in respect to the fluidity of their ejections. Those of Java, for instance, do not now throw out any molten lava, but only breccia, cinders, and ashes. The Hawaiian volcanoes, on the other hand, seem never to have ejected anything but lava of a high degree of fluidity. Vesuvius and Etna furnish both fluid and solid materials in abundance.

As a general rule, the very lofty cones do not emit currents of molten lava. Thus the great South American volcanoes throw out, almost exclusively, cinders and ashes. It may be stated that, in by far the larger number of instances, the great masses of lava which exist have come from low volcanoes, or still oftener from great fissures without any cones at all, in the form of "massive eruptions," as they are called, in which form, probably, by far the larger portions of the older volcanic rocks have come to the surface.

It is easy to see why, in lofty volcanoes, the lava should seek and find in many cases an issue at some point far below the summit. The higher the column, the greater the hydrostatic pressure, and when the resistance offered by this exceeds that which the sides of the mountain can oppose to it, the latter must give way, and the lava find a vent at the lowest available point. The constant battering of the internal walls of the chimney, kept up by the explosive forces within, gradually destroys the cohesive power of the material, breaks it up into fragments, or threads it in every direction with cracks, so that it finally yields to the repeated shocks, just as a piece of artillery fired with very heavy charges becomes at last too weak to resist any longer, and bursts into pieces. It is in this way that the fissures originate and become filled with molten lava, which solidifies in them, forming the dikes which are so common in volcanic masses, and which are so beautifully displayed in Etna, where its internal structure is revealed by the great cut into its heart called the Val del Bove.

The flow of lava, in volcanic eruptions, take place in very different ways, according to its consistency and the position of the point from which it issues. In general the crater fills up gradually, until the fiery liquid rises high enough to pour over the edge at the lowest point, when it runs down the slope with a degree of rapidity proportioned to its fluidity. The Vesuvian lava is usually very thick and ropy. One of the greatest currents of that volcano, — that of 1794, — which was over a thousand feet broad and from twenty to thirty deep, ran two and a half miles in six hours, or at the rate of 2,160 feet in an hour. The lava of Mauna Loa, on the other hand, is so liquid, that when it issues from the crater it pours down the steep

slope of the mountain, sometimes with amazing velocity. Thus Mr. Coan says of the eruption of 1855: "In one place only we saw the river [of lava] uncovered for thirty rods, and rushing down a declivity of from ten to twenty-five degrees. The scene was awful, and the momentum incredible. The fusion was perfect, and the velocity forty miles an hour." This lava, in making its way down the mountain-side, leaps over precipices in literal cascades of fire, presenting a most sublime spectacle. It occasionally forces its way out from a side fissure, — under immense pressure of course, — when it plays as a fountain, and the jets of liquid fire are reported by trustworthy authorities as rising sometimes to the height of six hundred or eight hundred feet.

Lava streams, however fluid the material may be, soon become covered, as they run down the sides of the volcano, with a consolidated crust. This hardened surface gradually thickens, and the bottom and sides also become more or less congealed, so that the flow continues through a sort of tunnel, as if it were being poured out of a sack made of its own substance. The surface gets broken up into great angular masses, which, by the motion beneath, are thrown into disorder and piled up on each other, as cakes of ice are on the sudden breaking up of one of our great rivers, — the St. Lawrence for instance. In the great eruption of Mauna Loa, already mentioned, the lava made its way seventy miles reckoned by the course of its flow, and forty in a direct line, to Hilo; and after its surface had become quite hard all the way, and there was no evidence of activity visible except the columns of vapor ascending from its head and foot, Mr. Coan believed that the interior was still moving downwards. This stream of lava was three miles wide on an average, and in some places three hundred feet deep. The masses of broken crust were piled up on it to the height of a hundred feet at various points.

The lava of Vesuvius seems more variable in its consistency than that of almost any other volcano. In the eruption of 1805, the velocity with which it issued from the crater was almost equal to that of the Mauna Loa current; on the other hand, the stream of 1822, when it reached Resina, moved at the rate of only five or six feet an hour. That of 1819 was in

motion, at the rate of three feet an hour, nine months after its issue. The rate of motion, measured by Dolomien, of one stream was a mile a year.

The low conducting power of lava is the reason why the interior of the mass can remain fluid so long and run beneath a crust of its own substance. The exterior hardens, can be walked over, or perhaps even cultivated, while the interior is still red-hot. This internal heat lasts for a long time. The lava of Jorullo was hot enough to light a cigar twenty-one years after its issue; and sixty-six years later it was still perceptibly heated, sufficiently so to give rise to *fumaroles*. One of the lava flows of Etna — that of 1787 — spread over a mass of snow, which, in 1830, still remained under it unmelted, while the overlying mass of rock was quite hot. The snow was preserved from melting by a cover of ashes, through which the heat was conducted with extreme slowness.

The manner in which volcanoes are built up by successive ejections of ashes, scoriæ, and lava, and the question whether the vast size of some cones is due in part to any other cause than this simple one of the piling up of erupted materials around a central orifice, now remain to be discussed.

The simplest possible form of a volcanic accumulation is that of the ordinary cinder cone, built up by a single eruption. Such cones are among the most common, as well as the most characteristic, features of almost every volcanic district. The coarse fragments thrown out heap themselves around the orifice as they fall, in the form of a circular bank, which, as the eruptive action continues, increases in size until it becomes a hill, having the form of a truncated cone, with a funnel-shaped hollow at the summit. A section of one will show that they are rudely stratified, and that the inclination of the strata decreases with the distance from the centre. These cones are of all sizes, from that of a hay-cock to that of a mountain. The "Puys," as they are called, of Central France, — Auvergne, Velay, and the Vivarais, — are hills of scoriæ thrown up in this way. Near Clermont-Ferrand there are above sixty cones strung together on a line more than sixty miles in length, and the fissure on which these were built up is continued in Velay and the Vivarais, with two hundred or more such cones arranged

in a belt twenty miles long. The shape of these accumulations of ejected materials varies with the conditions under which they are formed. When the wind blows steadily from one quarter, the materials will be more heaped up on one side, and this effect is very marked in the region of the trade-winds. A great many causes may be effective in modifying the cones thus formed. One is the issuing from them of a current of lava, by which the mass is broken down on one side; such breached cones are among the most common features of many volcanic regions.

An ordinary cone resulting from a single eruption consists, then, of a pile of scoriæ, lapilli, and other loose materials, with a single current of lava, which may have flowed from the summit, the side, or the base of the elevation, and which will be found spreading itself out over the adjacent region in a sheet or stream, proportioned in size to the extent of the eruption and the nature of the surface over which it has found room to extend itself. The result of repeated eruptions occurring from the same vent will be the gradual building up of a mass, which grows in size constantly but has the same kind of structure from top to bottom. Beds of solid lava alternate in it with others of fragmentary materials, and the whole system dips in all directions from the centre. It is not to be supposed, however, that any one of the beds of lava entirely surrounds the cone; on the contrary, if a horizontal section were made through such an accumulation, it would be seen that each outflow of molten rock has only added to the mass a portion of a concentric belt, so that the cone is built up by gradual additions of ejected materials, first on one side and then on another. Besides, there would be found, in many cases, a net-work of dikes of lava ramifying through the lower interior portion of the cone, and produced in a way which has already been indicated.

Almost all the older authors and many modern ones suppose that all volcanic cones have been built up in this simple manner. The theory originated by Humboldt and elaborated by Buch, and called the "crater-of-elevation theory," has found many warm supporters even among those who have worked long in volcanic regions, while it has been persistently opposed by most of the English geologists, especially by Lyell

and Scrope, as well as by Dana in this country. According to this theory, most great volcanoes consist of two portions, very distinct from each other in their mode of formation. The lower part, or base of the mountain as it might be called, consists of strata inclined at a less angle than the upper, and has not been formed by the accumulation of ejected materials, but consists, rather, of stratified masses, which may have been sedimentary beds deposited horizontally, or volcanic materials erupted from fissures under the ocean. In either case these beds are supposed, by the upholders of Buch's theory, to have been brought into their present inclined position by a "bubble-shaped elevation of the ground," caused by pressure of the volcanic forces confined beneath. On this inflated mass, through the centre of which the lava afterwards found its way, the cone of eruption is supposed to have been formed in the ordinary manner. In many cases, however, the process was a more complicated one. After the formation of the flattened dome-shaped mass, the volcanic energy, exerting itself at the base of the chimney by which the dome was penetrated, would fracture it in all directions, force lava into these fissures, swell out the mass, and gradually open a great crater at the summit, around the edge of which the strata would stand at a much greater angle than they originally had, it being maintained by Buch and the upholders of the elevation theory that lava could not consolidate in thick beds on steep slopes, — an assertion which has been abundantly disproved by observations in different parts of the world.

It is in this condition of dome-shaped elevation, caused by pressure from beneath, that Vesuvius is supposed to have been at the time Spartacus camped in its crater, just before the great eruption of 79. At the time the explosion took place, and the hidden forces obtained an outlet, one side of the crater of elevation was blown off, and an ordinary ash and cinder cone began to form in the cavity. The same mode of formation is claimed for Etna by Élie de Beaumont, one of the most zealous supporters of Buch's theory, who maintained that the lower portion of this great volcano was quite distinct in its formation from the upper; that the one was formed beneath the sea by the elevation of horizontally deposited

strata, while the other, or the cone proper, — which is eleven hundred feet high and has as steep an angle as thirty-two degrees, — was built up by subaerial accretions exclusively.

Buch applied his theory to the Peak of Teneriffe, of which he made a most detailed examination, and endeavored to explain by it the formation of the great semicircular wall which encloses the peak itself and the cone of Chahorra. This encircling precipice is, in places, full two thousand feet high and no less than eight miles in its longest diameter. Buch also visited and described with minuteness the beautiful island of Palma, a little west of Teneriffe, which is another of these great truncated cones, with a huge and deep cavity in the centre, called by the natives a *caldera* (kettle), from three to four miles in diameter, and walled in by a precipice varying from fifteen hundred to twenty-five hundred feet in vertical height. This boundary wall is so steep and unbroken that there is only one place where a descent is possible even on foot.

This kind of structure — namely, an encircling ring, of enormous dimensions compared with those of ordinary craters, with a cone in the centre — is quite common, and is especially well seen on some volcanic islands, where the internal structure is revealed by breaches made by the sea in the exterior wall. The interesting island of Santorin, in the Grecian Archipelago, is a good instance of this kind of arrangement, the volcanic fires here having been active of late, and the region one which has furnished material for a considerable number of volumes, as already mentioned. The island of Nisyros has a similar structure, the nearly circular crater being three miles in diameter and surrounded by a rim which rises from two thousand to twenty-three hundred feet above the sea. The island of St. Helena is described by Mr. Darwin as a trachytic volcano, encircled by a broken ring of basalt, measuring eight miles in diameter one way and four the other; the internal cliff faces are nearly perpendicular, except that they have in some places flat projecting shelves or ledges cut around them in parallel curves. Barren Island, in the Bay of Bengal, and the Mauritius, are other excellent examples of the same interesting type of structure. The encircling crater ring of the last-named island measures no less than thirteen miles in diameter.

Lyell, in the tenth edition of his "Principles of Geology," published two years since, has gone pretty thoroughly into the question of the applicability of Buch's theory to both Vesuvius and Etna, giving the results of his own repeated and recent examinations of these classic volcanoes, and pointing out that many important facts had been misapprehended by those geologists who had endeavored to show that the crater-of-elevation theory was the only one applicable to explain their form and structure. Hoffmann, many years ago, after a careful study of Vesuvius, abandoned the theory of Buch, which he had previously maintained. Of eminent French geologists, Cordier and Constant Prévost were also opposed to the idea of the building up of volcanoes in any other way than by the piling of one layer of ejected materials upon another.

The principal difficulty which those who do not support the crater-of-elevation theory have to meet is the enormous size of some of these great encircling rings, which would seem at first too large to be the result of explosive forces, implying as they do an astonishingly violent action and areas of vast dimensions over which the volumes of vapor must have been driven upwards.

There are craters of gigantic size, however, in regard to which it seems clearly demonstrated that they were formed in the ordinary way, that is, by the aggregation of materials erupted from a central orifice. Thus Kilauea does not bear any marks of being a crater of elevation; neither does the grand Haleakala, on the island of Manui, which is estimated to be some thirty miles in circumference. Junghuhn, who has made such a careful examination of the volcanoes of Java, gives it as the result of his observations that the great cones of that island have all been formed by eruption, and not by elevation; and he gives most excellent reasons for drawing this inference, — such reasons, indeed, as could only be successfully opposed by proving him to have misstated the facts. Similar conclusions have been arrived at by the writer of this article, after examining several of the great cones on the Pacific coast of North America.

If we consider what prodigious masses of material are thrown out, as already mentioned, in such eruptions as that of Tem-

boro or Coseguina, it will not be difficult to understand that a cavity of corresponding size must be left behind; and, as a means of enlarging such a cavity to an almost indefinite extent, we may call in both subaerial and submarine erosion, although the former has probably been usually by far the most effective agent in this respect. That any such great blister-like uplift of the superficial crust as was imagined by Humboldt to account for the dome-shaped base of Jorullo ever occurred seems, on the whole, highly improbable. His idea of a hollow crust or roof blown up over a vast empty space beneath will hardly be adopted by any geologist at present. Everything indicates, on the contrary, that, instead of there being a vacuum or a space filled only with gaseous substances under or over the centre of the volcanic action, there is much more likely to be a crowding together in that region of fluid material, seeking to find a vent. That great areas of stratified deposits might, under such conditions, be elevated into dome-shaped masses, is certainly not impossible; and yet it is questionable whether the fact of any such occurrence has ever been demonstrated.

It is indeed curious that the great name of Buch — a man once the very leader of geological science, and to whom Humboldt dedicated his *Kleinere Schriften* in these words: "Dem geistreichen Forscher der Natur, dem grössten Geognosten unseres Zeitalters, Leopold von Buch" — should for many years back have been most frequently quoted in order to bring forward fresh evidence against some one of his favorite theories, or to show how thoroughly he misapprehended some great geological phenomenon, like that of the distribution of the glacial boulders in Switzerland. Still the fact, however discouraging it may seem to those looking simply to permanence of personal reputation, is, in reality, an indication of progress in the science. Had Buch made a thorough examination of the geologically classic region of Southern Tyrol, he never would have given to the world a theory so entirely unsupported by facts as that by which he sought to explain the formation of the wonderfully picturesque cliffs of dolomite which have made that country so celebrated, and the origin of the rock of which they are composed. The day of generalizations of a magnitude

entirely disproportionate to the slender base of facts on which they rest has passed away; or, at least, the practice of bringing such theories forward with the positiveness, and upholding them with the obstinacy, of a Buch is one which is no longer in vogue.

There are, indeed, many geological phenomena the theory of which is obscure and difficult, and for whose final elucidation the stock of accumulated observation is still insufficient. If, with the view of directing attention to deficiencies in this stock, rather than of parading his actual knowledge, the geologist groups these facts together, and endeavors to show in what direction they seem to point or what the ultimate solution of the problem will probably be, he will, if his work be done in the right spirit, not incur the charge of rashly generalizing or of endeavoring to force his opinions on others. Among the obscurest and yet most attractive topics of geological investigation it would be safe to include the theory of volcanoes and earthquakes, and especially the connection of their phenomena with those movements of the earth's crust, which have resulted in the formation of continents and mountain-chains, and which, by altering the relative level of land and sea, have played the principal part in the long series of events that have been going on since our planet became the theatre of geological changes. This article, and one in the preceding number, may be considered as leading the reader to a point from which he will be able, with profit, and, it is to be hoped, not without pleasure, to survey the indicated field, and we shall endeavor at a future time to act as his guide in such a survey. Before closing, we must add a few pages to what has been said in a previous article, in regard to the geographical distribution of volcanoes, or their arrangement upon the earth's surface.

By far the most interesting fact in this connection is the proximity to the ocean of almost all active volcanic vents. Probably nine tenths of them are distributed around the Pacific, forming what has been aptly called a "circle of fire" full twenty thousand miles in length. The islands on the west side of that ocean form almost a continuous chain, beginning with the Aleutians on the north, and extending to New Zealand on the extreme south. This is pre-emi-

nently a region of active volcanism, for hardly a single one of the numerous islands in the various groups of which this belt is made up is entirely destitute of active vents, while on some of them they are crowded together by the hundred. In the groups of the Formosa, Philippine, Molucca, and Sunda Islands, there is perhaps the greatest concentration of volcanic energy which our planet exhibits. Nor is the east side of the Pacific less bountifully supplied with indications of igneous activity. Along the whole coast, from Patagonia to Alaska, the eruptive formations are displayed on the grandest possible scale, although the regions of present activity are sometimes widely separated from each other, and the volcanic belt, taken as a whole, presents evidences of a very considerable slackening of its energy since the close of the Tertiary period.

In the South American Andes the active volcanoes are chiefly limited to three great systems,—those of Chili, Bolivia, and Quito. Each of these has its grand cones, among which are the highest points in the world, with the exception of a few in the Himalaya. Aconcagua, the monarch of the Chilian group, lacking not much of twenty-three thousand feet in height, has been generally supposed to be a volcano, and was even reported by Darwin as having been in eruption in 1835. Some doubts have been thrown on this statement, however, by M. Pissis, a topographical engineer, who has been employed for years by the government of Chili in making a map of that country, and who maintains that Aconcagua consists of rocks of the Cretaceous series. It is curiously indicative of the feebleness of the spark of scientific inquiry which is kept alive even in the most enlightened of all the South American states, that so interesting a question should not have been definitely settled a long time ago. Still higher than Aconcagua is Sahama, chief of the Bolivian group, and only surpassed in elevation, on the American continent, by Illimani and Illampu. It is twenty-four thousand feet high, or one thousand feet higher than Chimborazo, which was long supposed to be the most elevated mountain mass of the New World, but which, although the loftiest of the magnificent group which surrounds the plain of Quito, is only 21,420 feet in height. Off the coast of Central and South America, at a consid-

erable distance, however, are groups of volcanic islands, with long intervals between them, which may be compared with the similar, but far more closely crowded ones on the opposite side of the Pacific. Along the line of these groups, within the intervals between them, frequent volcanic submarine eruptions have been observed, which have given rise to islands; these, however, have since been mostly washed away. If we may judge of the future by what has occurred in the past, it would be safe to predict that, as volcanic action dies out on the present coast line, a new belt will be gradually added to the continent on the west side. We might, without being considered as indulging in a fanciful speculation, say that the process of adding such a belt on the Asiatic side was already far advanced, while on the American it is just beginning. The most remarkable instance of insular volcanism on the east side of the Pacific is the group of the Galapagos, five hundred miles off shore, in the latitude of Quito. This group consists of five principal islands and several smaller ones, all volcanic. Craters have been seen in eruption on two of these, and on several of the others the streams of lava have quite a fresh appearance. The number of craters on the group is very great, having been estimated by Darwin at as high a number as two thousand.

The volcanic phenomena of the west coast of North America are on a still grander scale than those of the southern half of the continent, as far as the extent of the area covered by igneous products is concerned. There are not, however, as many very lofty cones, and not, in general, as much present activity. The highest development of volcanism on that coast seems to have occurred just at the close of the Tertiary epoch, and at that time the activity of the internal forces must have been prodigious. In spite of the immense erosion which has taken place since that time, the proofs of this activity are everywhere visible along the whole line of the coast from Central America to Alaska. The regions of active volcanic excitement on the Pacific coast of our continent are at present but two in number, and these are placed at the two extremities of the line, one in Central America and Southern Mexico, the other in Alaska and the Aleutian Islands. The southern region is

divided into two groups, the Central American and the Mexican; the former begins with the volcano of Chiriqui and extends to that of Soconusco, on the Isthmus of Tehuantepec,—a distance of full eleven hundred miles. This group is remarkable, not only on account of its parallelism with and close proximity to the coast, but for the number and size of the cones of which it is made up; of these there are more than fifty, almost all on the summit or else on the western flank of the Cordilleras. Perhaps, with the exception of Java, there is no region in the world where the volcanic vents are so crowded together. Of all the eruptions which have taken place here during the historical period, that of Coseguina, in 1835, already mentioned, was the most astonishing. The ashes thrown out at that time produced darkness for two days over a great extent of country, and covered an area as large as that of New England to the depth of several feet, the noise being heard in Jamaica and at Bogota.

Four hundred miles north of Soconusco, and exactly in a line with the prolonged axis of the Central American volcanic belt, rises the cone of Popocatapetl, generally considered the loftiest point of North America, and certainly the highest which has been accurately measured. Its only possible rival is its near neighbor, Orizaba, which has been made by some late, but not very trustworthy, measurements a little the higher of the two. Popocatapetl has been repeatedly measured with closely coincident results, so that we probably know its height within twenty-five feet; it is about 17,750 feet. Both these great cones belong to the chain of lofty volcanic vents which traverses the continent, in the direction of east and west, nearly in the latitude of the city of Mexico. Beyond this belt to the north, within the limits of Mexico, there are no active volcanoes; nor are there any on the peninsula of Lower California, as is uniformly reported in all the books; there are but few volcanic cones even, although rocks of this character in the form of dikes and sheets of lava are abundant in some parts of the peninsula. The volcanic formations on the mainland opposite are extensive and wonderfully varied in character; but they all belong to a past epoch of activity.

Crossing the Mexican boundary, and entering our own

territory, we find eruptive rocks abundant; and, on reaching the parallel of 35°, a little to the north of the centre of Arizona, another great volcanic belt may be traced across the Cordilleras, in a line transverse to their general trend. The most prominent cones of this belt are Mount Taylor, San Francisco Mountain, and Bill Williams's Peak, all magnificent mountains, probably between twelve and fourteen thousand feet high, but none of them has been ascended or accurately measured. They rise grandly from the plateau of horizontally stratified rocks, and are surrounded by vast lava fields bearing all the marks of having been erupted at no very remote period, although there are no indications of present activity.

Passing up through California and Nevada, we find all along both slopes of the Sierra Nevada, and on the parallel ranges east, entirely through to Salt Lake, abundant evidences of former volcanic action, on the grandest possible scale. On the east side of the mountains, this condition of activity seems to have ceased at the commencement of the present geological epoch, or at least to have diminished greatly in violence. The only indications of present volcanic activity along the Sierra Nevada, south of the north line of California, — aside from the numerous hot-springs, — are some comparatively faint remains of solfataric action on a few of the highest points. Thus Lassen's Peak, for instance, has several quite large areas where sulphurous gases escape from pools of hot water and boiling mud, while near the summit of Mount Shasta, amid the eternal snow, there is a hot-spring from which sulphurous vapors are constantly issuing. Between these two lofty volcanoes, one nearly 11,000 and the other 14,440 feet high, there are many others, some with wonderfully well-preserved craters, looking as if of very recent formation, yet entirely destitute of any traces of present activity. On the eastern slope of the Sierra, near Mono Lake, are a number of lofty and beautifully regular cones with well-defined terminal craters, yet apparently quite extinct. All through the State of Nevada, indeed, the mountain ranges are extensively flanked by vast accumulations of lava, and when we cross the Humboldt River, and traverse the region north of the parallel of 41°, we find a continuous covering

of volcanic materials extending over all the northern portion of Nevada and California, as well as Southern Idaho, Eastern Oregon, and Washington Territory. This region, which is covered almost exclusively with basaltic lava, is but little, if any, less than six hundred miles square, and occupies an area considerably larger than France and Great Britain combined. It is by erosion of rocks of this character that the many beautiful waterfalls of the Snake, Pelouse, and other rivers have been formed. Those of the Snake River are described by the few who have seen them as of surpassing grandeur. They must be among the very finest in the world, taking into account height, volume of water, and attractiveness of the surrounding scenery.

North of the California line the belt of nearly extinct volcanic activity is continued in the Cascade Range, — the prominent peaks and cones of that chain, which is in fact a continuation of the Sierra Nevada, being all of volcanic origin. The best known ones south of the Columbia River are — naming them from south to north — Mount Pitt, the Diamond Peaks, the Three Sisters, Mount Jefferson, and Mount Hood. The latter is a magnificent cone, very conspicuous over a great extent of country, and much looked up to and respected by the Oregonians, who were very wroth at having its boasted 17,000 or 18,000 feet cut down by the ruthless hand of science to 11,225. North of the Columbia are Mount Adams and Mount St. Helens, which are in nearly the same parallel; then, Mount Rainier, standing in solitary grandeur about seventy miles east-southeast of Olympia; and finally, Mount Baker, near the line of British Columbia. Of these great cones, Mount Rainier is the noblest: as seen from Puget's Sound, covered with snow nearly down to its base even late in the summer, it is truly a magnificent object. Its summit has never been reached, so far as we can ascertain, while all the other important cones of this region have been repeatedly ascended. That any of these volcanoes have emitted streams of lava since the country became known to the whites is not probable; but that ashes have been thrown out from two of them, Mount St. Helens and Mount Baker, seems to be well authenticated. The newspapers have frequent accounts of columns of vapor being seen to issue

from Mount Hood, and of other indications of activity being displayed by the great cones which are such conspicuous objects to those passing up and down the Columbia. These stories, when not intentional fabrications, may perhaps be attributed to the fact that sometimes on clear days the moisture in the air blowing from the ocean is condensed around the cool, snow-covered summits of the cones, so as to have somewhat the appearance to a not very critical eye of clouds of vapor issuing from them. We obtained pretty satisfactory testimony that Mount Hood at least had shown no signs of activity during the past eight or ten years.

There are also most conflicting statements with regard to the condition of the volcanoes through British Columbia and Alaska. Thus Scrope, a careful and trustworthy authority, says of Mount St. Elias, that it has certainly been seen in eruption, while Grewingk, a well-known geologist who explored that region and carefully examined all the published authorities on the subject, declares that none of these volcanoes — St. Elias, Edgecombe, Fairweather, etc. — have been active during the historical period, or, at least, that there is no evidence of any such activity.

J. D. Whitney.

Art. IX. — CRITICAL NOTICES.

1. — *The Pre-Columbian Discovery of America by the Northmen, illustrated by Translations from the Icelandic Sagas. Edited, with Notes and a General Introduction, by* B. F. De Costa. Albany: Joel Munsell. 1868.

More than thirty years ago the hope was expressed in this Review that the interesting documents relating to the discovery of America by the Northmen, which had just been published in the *Antiquitates Americanæ*, might be put into an English dress, and prepared for the perusal of the general reader. In the following year appeared the work of Mr. Joshua Toulmin Smith, "The Northmen in New England, or America in the Tenth Century." To heighten the interest of the subject, Mr. Smith threw his discussion into the form of dialogue; but

his vivacity proved so oppressive that, in spite of the undeniable ingenuity with which he handled his argument, his book was soon as completely forgotten as Greenland had been during the seventeenth century. Three years later a translation, by Beamish, of the Sagas relating to the discovery of America was published in London. In 1844, the well-known translation of the Heimskringla, by Mr. Samuel Laing, appeared. Mr. Laing, who had his own opinion about the Northern antiquaries, placed in an appendix the eight chapters which, in the opinion of the critics, had been interpolated in Peringskiold's edition. The original authorities, on which rests the claim of the Northmen to be regarded as the discoverers of the New World, have therefore been for a long time within the reach of the English reader. Still there remained ample room for a new work, in which all the original documents might be brought together and carefully collated, and the reasons for receiving them as authentic, and as anterior to the time of Columbus, clearly exhibited. Notwithstanding the ridicule which fell upon the absurd speculations of the Northern antiquaries respecting the Old Stone Mill and the Deighton Rock, and notwithstanding the inaccurate paragraph which Mr. Bancroft suffers to remain at the beginning of his history, most men are by this time satisfied that the Northmen must have possessed some acquaintance with this continent. But the precise grounds for this generally accepted conclusion few would be able to give, and a thorough and impartial investigation of the whole subject, showing exactly how much has been proved and by what kind of evidence, would be a most valuable and welcome addition to our historical literature.

In a work which has recently appeared from the well-known press of Mr. Munsell, a laudable attempt has been made to supply this deficiency. Mr. De Costa has collected every passage in the Scandinavian Sagas which relates to the discovery of the New World, giving in part translations of his own and in part translations of Mr. Laing's. Some of his extracts are wholly new in an English dress. He very properly begins with the Sagas relating to the discovery of Gunnbiorn's Rocks, which led to the first voyage of Eric the Red to Greenland. These extracts are from *Grönlands Historiske Mindesmærker*. After this follow the Saga of Eric relating to the discovery of Greenland, and the Saga of Biarne Heriulfsson. Next are given the Sagas of the three sons of Eric, — Leif, Thorvald, and Thorstein. The most important and interesting of all the Sagas — that of Thorfinn Karlsefne — stands next in order, and the voyage of Freydis, the sister of Leif, concludes this part of the work. That the reader may be put in possession of all that relates to the subject, the doubtful account of the voyage of Are Marson to Great Ireland, the allusions to later voyages found in an-

cient manuscripts, and some geographical fragments in which reference is made to Vinland, are grouped at the end of the book.

Mr. De Costa has not confined himself to giving these narratives in a single form. Thus, of Eric's discovery of Greenland we have three distinct accounts, the first being derived from the *Antiquitates Americanæ*, the other two from the *Historiske Mindesmærker*. Of the voyage of Biorne we have two versions, derived from the same sources. The Saga of Leif the Fortunate, who is fairly entitled to the glory of having first set foot on the New World, is given in three versions, — one, the longer form, as given by Mr. Laing, the other two very brief. The Saga of Thorfinn is also given in three versions, as they are printed in the *Antiquitates Americanæ*. All Mr. Laing's translations are reprinted by Mr. De Costa; but Mr. Laing, as his work was simply a translation of Snorro Sturleson's Chronicle, and not a treatise on the discovery of America, very properly confined himself to giving the Sagas as they had been printed by Peringskiold, by whom, as is now agreed, they were taken from the *Codex Flatoiensis*. But in this manuscript the very important Saga of Thorfinn appears only in a brief form. The fuller account of Thorfinn is derived from a manuscript in Arne Magnussen's collection, and is translated by Mr. De Costa from the *Antiquitates Americanæ*. Hence we have much more than a reprint of Mr. Laing.

But while we have every disposition to commend Mr. De Costa's industry and zeal, we are sorry to feel obliged to say that his work by no means supplies the deficiency that has so long existed. The most that we can say in favor of his labors is that he has given us the original authorities in an English dress. Of the original matter which he has contributed we can express no very high opinion. His Introduction is ambitious in its style and irrelevant in its matter, and betrays an entire misconception of the problem he had to solve. Surely these simple tales of adventurous discovery are not invested with any increased authority by the statement that "before the plains of Europe, or ever the peaks of Chonmalarie, rose above the primeval seas, the continent of America emerged from the watery waste that encircled the whole globe, and became the scene of animate life." One might not unreasonably infer from such a sentence that we were about to trace the discoveries of men who were contemporaries, not of Hugh Capet, but of the dwellers in the bone-cave of Aurignac, or the original owner of the Neanderthal skull. Mr. De Costa relinquishes, with evident reluctance, the Deighton Rock and the Newport Mill, but he more than offsets his discretion on this point by a labored attempt to prove that the island which was seen by Leif, as he sailed by that

part of Vinland which was afterwards named by Thorfinn *Wonderstrand*, and which was identified by Professor Rafn with Nantucket, was nothing else than the Isle Nauset, which formerly existed on the coast of Cape Cod, but has long since disappeared. In the same spirit, treating these Sagas precisely as though they were the log-book of a Cunard steamer, he persists in following the Northmen up the Seaconnet passage, and into Mount Hope Bay. To do this, he is obliged to transform this broad expanse of salt water into a lake, and gravely assures us that it not only has this appearance to the traveller passing it by rail, but is often called so, — a statement which, we venture to say, will astound those who have lived by it all their lives. With the same resolute determination to make out a case, the pretty eminence, less than two hundred feet in height, near which King Philip met his death, and which to the eye scarcely breaks the line of the horizon, is not only made a mountain, but is connected with the stupendous range known as the Milton Hills! And this application of language is gravely imputed to men fresh from the snow-crowned summits of Iceland, and the inaccessible cliffs of Greenland.

We had thought that the time for this laborious trifling had gone by. The Sagas which describe the discovery of Vinland, though not originally a part of the Heimskringla, are now admitted by all competent scholars to belong to the same class of compositions. That they were not adopted by Snorro into his great work will be regarded as no evidence whatever against their authenticity, when we bear in mind that his work was a chronicle of the Kings of Norway, and that he was in no way concerned with a subject the importance of which was not at that time at all understood. The style of all these Sagas is that of the twelfth century; they must therefore have been committed to writing in their present form at a period certainly as early as that in which the Heimskringla was composed. Like that extraordinary composition, they belong to that epoch in the development of Scandinavian literature when the Skaldic songs were beginning to give place to prose composition. In his Preface, Snorro Sturleson, giving the sources from which he had drawn, says that they were old stories, as he had heard them told by intelligent people. Some things, he says, were found in old family registers, and part "is written down after old songs and ballads which our forefathers had for their amusement." Accordingly, at the close of the fifth paragraph of the Ynlinga Saga he introduces a quotation from Brage the Old. Nor was it only when treating of a mythological period that the historian made use of these old songs. In the Saga of King Olaf Tryggvesson, in whose reign Leif the Fortunate made his famous voyage to Vinland, there occur no less than fifty-five quotations

from old songs of the Skalds, some of them of considerable length. In fact no one can examine the history of Snorro Sturleson without seeing that it must be, to a considerable extent, simply a prose rendering of old ballads, in which the traditions of the nation had been enshrined. Now the Sagas which relate to the discovery of America show precisely the same characteristics. Thus, when Thorhall was carrying water to his ship, he sang a song; and, when he and his companions were about to sail north around Wonderstrand, they sang again; and both these songs are preserved in the Saga of Thorfinn. So, when Thorfinn's people chased the uniped they sang. Who can doubt that these verses, instead of being songs that were actually sung on those occasions, were but fragments of the original ballad of which the narratives are merely prose abridgments, and that these portions chanced to be preserved simply because they struck the ear of the later annalist?

With this view of the nature of these old Sagas (and we do not see how any one who gives the least attention to what Snorro Sturleson says can take any other), the absurdity of treating them as Mr. De Costa persists in doing is manifest. Nobody doubts their substantial truthfulness. Nobody, so far as we know, would deny that they describe occurrences which actually took place. Mr. Bancroft could hardly have gone wider of the mark than when he asserted that these narratives are mythological in form, for there is not a single element of proper mythology mixed up with them. We think that Mr. Freeman, in his recent History of the Norman Conquest, a good deal overstates the matter when he speaks of the "half-fabulous narratives in the Norwegian Sagas." A story may be exaggerated and inexact, and yet fall very far short of being half-fabulous. We think there is every reason to believe that those who wrote the Sagas of Eric and his sons, and of Thorfinn Karlsefne, as well as Snorro Sturleson, aimed to tell the simple truth, as they had heard it told to them. But we must bear in mind what the sources were whence their information was derived. The expeditions of Eric and of Thorfinn were made at the close of the tenth or very early in the eleventh century. The famous "Flato" manuscript, in which the earliest account of these expeditions is preserved, was written between the years 1387 and 1389. There are, however, internal reasons for supposing that they were reduced to their present form during the twelfth century. But granting this much, more than a century must have elapsed before they passed from the form of oral tradition. These traditions, no doubt carefully preserved and handed down, were derived, in the first instance, from the reports which the voyagers themselves brought back. But how precise were these?

Did the voyagers keep an accurate log? Were they always careful to note how many days they drifted? In short, are we to assume the literal exactness of every statement in these Sagas? This some writers — and Mr. De Costa must be counted among the most persistent of the number — insist on doing. Not content with the general proposition that the Northmen visited our coasts, he gravely remarks in his notes: "This Cape was evidently not Point Gilbert, but the terminus of Cape Cod, known as Race Point." "This was the bay situated between Point Gilbert and Isle Nauset." "This was Nantucket." He does not, however, press the coincidence between Mount Hope and the name of Hop, which Thorfinn gave his settlement. Even Rafn, whose faith was almost boundless, was a little staggered by the hypothesis that a tribe of Indians should have preserved for nearly six centuries the designation applied to a locality by a few wandering Norsemen. Of course the principal passage relied on by those who assert the possibility of a precise geographical determination of the discoveries of the Northmen is the statement in the Saga of Leif, that day and night were more equal in Vinland than in Greenland or Iceland: "for on the shortest day the sun was in the sky between Eyktarstad and the Dagmalastad." Mr. De Costa has a long note on this, giving the substance of the view advocated by Rafn and Finn Magnussen, which fixes the latitude of the place at 41° 43′ 10″, being nearly that of Mount Hope Bay. The question is too intricate to be discussed in this place. Torfaeus, confessedly the highest authority on the general subject of Northern antiquities, gives one interpretation: Peringskiold, who, though a Swede, had the assistance, in preparing his translation, of Gudmund Olafsen, a learned Icelander, gives another; while Schöning, whose edition of the Heimskringla — the first volume of which was published in 1777 — is altogether the best that has yet appeared, adopts still a third. The interpretation given in the *Antiquitates Americanæ* is substantially that of Schöning, who derived it from an Icelandic bishop. In the face of all these differences Mr. De Costa characteristically remarks, "Thus we know the position of the Icelandic settlement in New England." We submit, on the contrary, that even were the precise meaning of the two Icelandic words *Eyktarstad* and *Dagmalastad* ascertained beyond a doubt, which is by no means the fact, still such a statement, borrowed perhaps by an old legend from a still older song, could hardly be relied upon as the basis for an astronomical calculation. We are ready to admit that the passage proves that Leif and his companions wintered a good way south of Greenland; for otherwise there would be no way of accounting for the mention of the fact that there was such greater equality of days and nights than in Greenland; but we protest against apply-

ing the exact processes of science to the elucidation of a passage the etymological interpretation of which is still involved in so much obscurity. To us the whole discussion of the question in the *Antiquitates Americanæ*, has quite too much the appearance of an afterthought. Would the learned editors of that invaluable collection have been such sticklers for the old Stone Mill and the Deighton Rock?

We regret that Mr. De Costa did not give less attention to these details, and more to a broad presentation of the grounds on which these Sagas should be accepted as substantially historic. Such a presentation might easily be made, and made with convincing force. But the most important circumstance bearing upon the historical authority of the Sagas he only alludes to in the most incidental manner, and evidently with no appreciation of its importance. We refer to the fact that there are discrepancies between the Sagas relating to Eric and his sons and those relating to Thorfinn, of such a nature as to leave no doubt that they must have come to us from two wholly distinct sources. Torfaeus was the first to direct attention to these discrepancies, at the same time remarking that they were of a nature to confirm rather than disprove the statements. The Eric Sagas were evidently composed in Greenland, while those relating to Thorfinn had their origin in Iceland. The discrepancies are in themselves of very little consequence, but they serve to establish the important fact, that the Sagas of Eric and of Thorfinn must be received as two independent authorities. Had Mr. De Costa so arranged his book as to have brought this main fact distinctly before the reader's eye, he would have added very greatly to its value. As the Sagas are printed, there is nothing whatever to indicate that the Saga of Thorfinn has anything to distinguish it from those which precede it. And yet this distinction is the most important feature which a critical student would rely upon to establish the historical character of the testimony adduced. Coupled with this fact of the independence of the two accounts is the fact that there are many little points of agreement, undesigned coincidences, which also goes far to confirm the impression of their truthfulness. Mr. Joshua Toulmin Smith, as it seems to us, treated this part of the subject with a good deal of skill, and Mr. De Costa might have profited by his example.

We confess, also, to a feeling of some disappointment on finding that Mr. De Costa is able to give us the results of no more recent researches than those recorded in the *Antiquitates Americanæ*. That work was published more than thirty years ago. *Grönlands Historiske Mindesmærker*, from which he has derived a portion of his material, appeared in 1838. Is it possible that the Danish antiquaries

have done nothing, for more than a generation, to illustrate this most interesting portion of their early history? If nothing whatever of importance has appeared since, at least the fact should have been stated. In some of his references to the earlier authorities, Mr. De Costa is not accurate. Thus, on p. 12, he quotes in a note from Torfaeus the statement that Greenland was first discovered by Gunnbiorn; but a reference to the passage in the *Gronlandia Antiqua* will show that Torfaeus, in this place, is simply quoting the language of an earlier writer. So, in his Introduction, he refers to this same work of Torfaeus as throwing much light on the early voyages of the Northmen to America. Now, we venture to say, that in the whole of the *Gronlandia Antiqua* there are not, at most, more than four or five allusions to Vinland, and these are hardly more than mentions of the name. The work of Torfaeus, in which the voyages of the Northmen are so thoroughly discussed that it may be questioned whether more recent investigations have added anything of value to his treatment of the subject, is the *Historia Vinlandiæ Antiquæ*, a volume which is classed by Professor Rafn as *inter rarissimos libros*, and seems wholly to have escaped Mr. De Costa's notice. We know, however, of at least two copies of this work which are not inaccessible to the historical student. These errors are of no great consequence, but they are errors which should not be found in a work devoted to the special discussion of a chapter of Scandinavian history.

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2. — *Étude chronologique des Livres d'Esdras et de Néhémie.* Par F. DE SAULCY, de l'Académie des Inscriptions et Belles Lettres. Paris. 1868.

M. DE SAULCY, the veteran numismatist and archæologist, has augmented the number of his monographs on Hebrew antiquities by a chronological *étude* on Ezra and Nehemiah, or, to speak more accurately, on the whole Persian period of Jewish history and a part of the following period. This elaborate, suggestive, and interesting essay, like all the other works of its distinguished author, is, as he informs us in a dedication to the Abbé Chauliac, the fruit of studies preparatory to the writing of a long-meditated history of the Maccabees. The materials from which the necessary data were to be drawn, M. de Saulcy justly complains, are in conflict "with each other, and sometimes with themselves," scanty, and rather inconclusive, the principal being: the Books of Ezra, Nehemiah, Esther, Haggai, and Zechariah; the Books of the Maccabees, both canonical and apocryphal; and the History of

Josephus. These he has closely studied, examining the most minute details, with the eye of independent and unprejudiced criticism. In reaching his conclusions he was controlled neither by the texts of the scriptural books, nor by the authority of Josephus, nor by the concurrent opinions of modern critics. In fact, his disregard of texts and recent authorities is striking, and borders on arbitrariness, while Josephus is both treated with contempt and followed with deference, the reason of the latter course remaining unexplained. His principal conclusions may be briefly summed up in the following table of events and dates: —

538, B. C. — Cyrus captures Babylon.
537. — He releases the Jewish captives; Sheshbazzar leads the first party of Jews returning to their country.
529–522. — Reign of Cambyses, designated in the Book of Ezra by the name of Artahshashta; he stops the reconstructive works of the Jews.
522, 521. — Gomates (Pseudo-Smerdis) reigns seven months, unmentioned in the Scriptures.
521. — First year of Darius Hystaspis; Zerubbabel and Jeshua lead a second party of returning Jews.
520. — Aided by Haggai and Zechariah, they commence building the Temple.
515. — The Temple is completed.
485. — Xerxes, the Ahasuerus of the Book of Esther, succeeds Darius.
465. — Artaxerxes (I.) Longimanus, unmentioned in the Scriptures, succeeds Xerxes.
424–404. — Reign of Darius (II.) Nothus, unmentioned in the Scriptures.
404. — Artaxerxes (II.) Mnemon, the Artahshast of Ezra and Nehemiah, ascends the throne.
397. — Ezra arrives in Jerusalem.
384. — Nehemiah rebuilds the walls of Jerusalem; Ezra and Eliashib assist him; Sanballat the Horonite and his associates try in vain to check the work.
372. — Nehemiah a second time in Jerusalem.
359. — Artaxerxes (III.) Ochus, unmentioned in the Scriptures, succeeds Artaxerxes II.
336–330. — Reign of Darius (III.) Codomannus; he appoints Sanballat the Horonite satrap of Samaria; the latter gives his daughter in marriage to Manasseh, the brother of the high-priest Jaddua; Nehemiah drives Manasseh from Jerusalem.
330. — Darius is overthrown by Alexander the Great; Sanballat joins the conqueror, and builds the Samaritan temple on Mount Gerizim.

In order the more easily to determine what in these historico-chronological statements may be regarded as more or less original with M. de Saulcy, we shall contrast with them the corresponding dates

established by Zunz and Ewald, with whom Gesenius, Munk, Hersfeld, Fürst, and almost all other recent biblical critics of note agree in all important particulars. These are: —

538. — Capture of Babylon.
536. — Cyrus allows the return of the Jews; Zerubbabel, whose court-name is Sheshbazzar, and Jeshua, the high-priest, lead the first returning column.
535. — The Samaritans check the building of the temple.
529 - 522. — Reign of Cambyses (the Ahasuerus of the Book of Ezra, whom M. de Saulcy passes over in silence).
522. — Pseudo-Smerdis, the Artahshashta of the Book of Ezra; beginning of the reign of Darius Hystaspis.
521. — Darius allows the rebuilding of the temple; Haggai and Zechariah co-operate with Zerubbabel.
516. — The Temple completed.
485. — Xerxes, the Ahasuerus of Esther, succeeds Darius.
465. — Artaxerxes I., the Artahshast of Ezra and Nehemiah, succeeds Xerxes.
459 (Ewald, 458 Zunz). — Ezra in Jerusalem.
445 (Ewald, 444 Zunz). — Nehemiah rebuilds the walls of Jerusalem; hostility of Sanballat and his associates.
424 - 404. — Reign of Darius II.; Nehemiah a second time in Jerusalem; he drives out Manasseh, grandson of the high-priest Eliashib, and son-in-law of Sanballat, who seeks refuge in Samaria; building of the Mount Gerizim temple (Zunz, later according to Ewald).
364 (Zunz, 359 Ewald). — Artaxerxes III. ascends the throne.
336 - 330 (Ewald, 335 - 330 Zunz). — Reign of Darius III.

A comparison of the two tables will show the following deviations, in M. de Saulcy's *Étude*, from the prevalent opinion, besides some chronological variations of minor importance: According to M. de Saulcy, Sheshbazzar is not identical with Zerubbabel; the former leads the first column of returning Jews; Cambyses is not identical with the Ahasuerus of Ezra (iv. 6), but with Artahshashta (Ez. iv. 7 seq.); for Smerdis there is no name in the Bible; Zerubbabel leads his followers to Judæa, not under Cyrus, but under Darius; the Artahshast of Ezra and Nehemiah is not identical with the first Artaxerxes of the Greek historians, but with the second king of that name; the Sanballat of Nehemiah is identical with the Sanballat of Josephus, a contemporary of Alexander.

To establish his points, M. de Saulcy adduces no evidence unknown to former critics. The newly deciphered inscriptions of the East are silent on these points; the well-known and long-scrutinized texts of the books mentioned above, besides some inconclusive and equally well-known

fragments of others, contain all that can serve as information. Now, with the same texts before us, we cannot refrain from stating that their internal evidence is all against the conclusions of M. de Saulcy. Omitting the minor, historically unimportant discrepancies, all of which turn upon certain passages and names contained in the fourth chapter of Ezra, we must call attention to the main points, those concerning the reigns under which Zerubbabel and Nehemiah began their memorable careers. Whether Zerubbabel, "the pasha of Judæa," as Haggai calls him, and of whom Zechariah says (iv. 9), "The hands of Zerubbabel have founded this temple," is identical, or not, with Sheshbazzar, whom Cyrus "made pasha" (Ezra v. 14), and who "laid the foundations of the temple in Jerusalem" (*Ib.* 16), may possibly still be open to discussion; but to assert, as our author does, — and that on very trifling grounds, — that Zerubbabel had nothing to do with the first return to Judæa; that the twice-given list of those who "came with Zerubbabel" (Ezra ii. 2; Neh. vii. 7) refers to a different expedition than his; that the first interruption of the reconstructive works of the Jews by the Samaritans, who — as is distinctly stated — addressed themselves "to Zerubbabel" (Ezra iv. 2), and were answered by "Zerubbabel, Jeshua," etc. (*Ib.* 3), is to be explained as referring to "une action antérieure à celle à laquelle donna lieu la venue de Zeroubabel," — is simply, we think, to fly in the face of narratives as full and as distinct as any we have in Jewish history. On this point, M. de Saulcy has against him also the testimony of Josephus, which he rejects the more readily, as he is not at all surprised to find "une erreur de plus de sa part, à ajouter à toutes celles que nous avons déjà tant de fois relevées." And yet it is — as far as we can discover — only the narrative of that inaccurate historian concerning Sanballat and his connection with Darius III., Alexander, and Jaddua, that causes M. de Saulcy to place the career of Ezra in the time of Artaxerxes II., and to make Nehemiah a contemporary of the Macedonian conqueror. In order to do this, it is, however, necessary to make both Nehemiah and Sanballat figure at the head of hostile camps at two periods fifty years apart, and to leave a blank in the history of the Jews of Palestine extending from about B. C. 515 to B. C. 397. This is, of course, not a fatal, though certainly a serious objection to the proposed change in the chronology of the age of Ezra and Nehemiah; but what makes that change decidedly unacceptable — as long as we entertain the slightest regard for biblical texts — is the connection repeatedly mentioned of Nehemiah with the high-priest Eliashib, who, according to our author's own showing, can be computed to have flourished in the time of Artaxerxes I., full one hundred years before Alexander

and the equally distinct mention (Neh. xii. 26) of Ezra, Nehemiah, and Joiakim, the father of Eliashib, as contemporaries. In the face of all these difficulties, M. de Saulcy does not hesitate to follow the lead of Josephus, — whose books, as he acknowledges, swarm with anachronisms, — and we must consider it as ironical when he says, speaking of Eliashib: "Nous nous inclinons d'ailleurs devant le texte biblique." We, on our part, profess no undue reverence for texts, but we would sacrifice none that are intrinsically credible, in order to save the credit of a narrative of Josephus.

The most valuable contribution to archæological discovery contained in the monograph before us is, we believe, the digression, at its close, concerning the age of the ruins of Arak-el-Emir, or Kasr-el-Aabed, which bear in two inscriptions, lately deciphered by Dr. Levy of Breslau, the name of Tobiah, who appears to be the Ammonite *ebed* of that name, — the associate of Sanballat, — and the history of whose descendants M. de Saulcy traces in an ingenious way. But want of space compels us to refer our readers to the little book itself.

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3. — *Travels in the East Indian Archipelago.* By Alfred S. Bickmore, M. A., etc. New York: D. Appleton & Co. 1869. 8vo. pp. 553.

Next to the pleasure of visiting foreign countries, and especially those but little known, is the enjoyment of the traveller in telling his adventures; but the small company of travellers who give as much pleasure to their listeners as to themselves does not increase rapidly in these days of easy transit. Now, more than ever, is it necessary to prepare for a scientific journey by careful study and faithful training, if the result is to be of real value. It is so easy to visit regions once almost inaccessible, that many of our travelling countrymen, aiming at a reputation once purchased only by patient, brave, self-sacrificing, intelligent work, imagine themselves called upon to be Humboldt's successors, and for a time enjoy a cheaply purchased honor.

A private exploring expedition is usually far more successful than the cumbrous armies or navies governments commonly send out, and the greater part of the known species, both of plants and animals, have been discovered through the enterprise of expeditions consisting of one or two devoted students of nature, who have gone forth to new fields, as did the disciples of Linnæus, not for pecuniary advantage or for fame, but with the single purpose of advancing science. Knowing the advantages of individual labor in the world-wide field of geographical

exploration, we should not have been surprised had Cambridge sent out a pupil whose discoveries or observations, even in so accessible a region as the East Indian Archipelago, would have added much to the store of knowledge which Rumphius, Valentyn, Reinwardt, Junghuhn, Marsden, Raffles, and Crawfurd have collected during the past century and a half. We had hoped to find something new in the results of an exploration of such a region by one who had been the pupil of so distinguished an instructor as Agassiz; but the volume before us is scarcely more than a record of neglected opportunities. And yet, as Murchison says, it is a very readable book, containing many vivid pictures of the tropical scenery cold New-Englanders like because they cannot fully appreciate it. It is because the book offers so much that is interesting and attractive to the general reader, that its blemishes are worthy of notice.

Although professedly a record of the travels of a scientific man, — a member of many learned societies, — the volume before us might be mistaken for the work of a mere commercial traveller, whose interest in science extended only to the price of shells and rare bird-skins, so completely has the author concealed his real love of Nature and devotion to her service. Who would see an ardent naturalist in Mr. Bickmore's description of his shell-gathering — the prime object of his expedition? Scientific collectors will be surprised to learn that instead of going out on the coral reefs which he describes with so much truth, or joining the native fishermen on their excursions, Mr. Bickmore, on coming to a village, had the official drum beaten, and notice given to the shell-pedlers and others interested that he was ready to deal with them. He then seated himself behind a table, in some public place, and, as the shells were produced, placed beside them what he considered an equivalent, and pronouncing the *Ina atau itu* ("this or that"), concluded the bargain. For the localities of the shells he was dependent on the inaccurate reports of a people whose language he understood but imperfectly. He had no means of knowing at what depth the animals lived, nor of noting the many little facts an actual collector considers important. This is the more remarkable, since by his own account he was once very successful in collecting on a coral-reef. Although fault may be found with his method, his frankness in describing it is commendable, and the very large and interesting collection sent to this country seems to have been considered very valuable by those who have paid generous prices for the duplicates. Although shells were the principal object of the expedition, birds were by no means neglected; but, so far as we can judge by the book, botany was wholly ignored and geology received little attention.

It is hard to repress a feeling of great disappointment, when Mr. Bickmore enlarges upon his singular facilities for travelling, the letters he carried to and from the officers of government best able to forward all his plans, and the opportunities which absolutely seemed to drift in his way. Geologists and botanists might envy him his opportunities, but hardly his achievements.

One of the most amusing features of Mr. Bickmore's narrative is his apparent unconsciousness that much of what he saw for the first time is an old story to the thousands who yearly pass through the Straits of Molucca on their way to and from China. That most common amusement in the tropical seas, of diving for any bright coin, fills him with wonder, and he rather unadvisedly declares the skill exhibited "quite as wonderful as is shown by any of the natives in the South Seas." When a native adopts that very common Polynesian custom of making a raft of cocoa-nuts, he seems to give the man credit for a new invention. A volcano only 2,321 feet high presents difficulties almost surpassing those of the ascent of Mont Blanc. These are, however, unimportant mistakes that one might easily make on a first introduction to the wonders of the tropics; but the mistakes, or misstatements, in regard to several botanical matters might seriously mislead a reader, as when, for example, our author asserts that the *pandanus*, or screw-pine, "may be correctly described as a trunk with branches at both ends," making no distinction between branches and aerial roots; or when he says that the banana "corresponds well to the tree that yielded her fruit every month," when in truth the plant bears fruit but once and then withers. Again, in speaking of a famous prophet or teacher, Nabiata, he mentions the rite of circumcision introduced by him as an indication that Nabiata was a Mohammedan, apparently unaware that the custom was widely prevalent in Polynesia long before the advent of this prophet, and indeed, far from being confined to Hebrews and Mohammedans, is probably practised by more than half of the inhabitants of the world.

But we may hasten over these defects in an interesting volume, regretting the crude arrangement of the materials, the unsystematic interpolation of nearly forty pages of historical matter, often neither new nor explanatory, and the disagreeable prominence given to the author in the foreground of all his most interesting pictures. We may pardon him his dread of earthquakes and volcanoes, and the frequent allusions to his service in the war of the Rebellion, in consideration of the gallantry he displayed in a combat with a gigantic python. This was housed in a box eighteen inches long and a foot wide and deep, one side being of slats. Not liking these narrow quarters, the ser-

pent came out soon after being placed on board the ship in which our author left the scene of so many adventures, and like the genius in the Arabian tale of the Fisherman, when once out of the box, expanded into such a huge monster that the whole crew of the vessel drew off in mortal terror. Even the captain, armed with two revolvers, could not trust his trembling hand to shoot the python. Mr. Bickmore alone was cool and self-possessed, and in the coolest and airiest of costumes advanced to the conflict. "I felt the blood chill in my veins," he confesses, "as for an instant we glanced into each other's eyes, and both instinctively realized that one of us two must die on that spot." All but exhausted, he is at last about to succumb, when an axe is handed him and he slays the reptile. Tugging his vanquished enemy across the deck, he heaves him into the sea, and then sails on to the "great empire of China, where I travelled for a year, and passed through more continued dangers and yet greater hardships than in the East Indian Archipelago."

With these defects are mingled many interesting and well-told narratives, and certainly the author has exhibited considerable patience and perseverance in concealing the enthusiasm which doubtless forms an important part of his character as an explorer. We shall look with interest for a continuation of his travels in China, where he visited many places seldom described.

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4. — *The Ring and the Book.* By Robert Browning, M. A. Boston: Fields, Osgood, & Co. 1869. 2 vols. 12mo.

A well-known editor says that half the value of a newspaper leader is in its heading, or, if it have no heading, in its opening sentence. "The Ring and The Book," — had ever poem a lovelier name? The costliest metal, the perfect shape, the dearest human affection, — gold, the circle, love, — are all suggested by the words, "The Ring." And "The Book," what is it but an image of the spiritual essence, stamped upon an alien element?

> "Do you see this Ring?
> 'T is Rome-work made to match
> (By Castellani's imitative craft)
> Etrurian circlets found, some happy morn,
> After a dropping April; found alive
> Spark-like 'mid unearthed slope-side fig-tree roots
> That roof old tombs at Chussi: soft, you see,
> Yet crisp as jewel-cutting."

Had ever poem a more fortunate first sentence? Seven vivid lines, as "crisp as jewel-cutting."

The works of the ancient poets come down to us winnowed by the forgetting winds of time; they are not classified according to years; they furnish us themselves the rules by which we praise them, and the verdicts have long been made up beyond reversal. Homer, Anacreon, Theocritus, are for us less men than parchment scrolls, — names wandering homeless in history; *vagatur nomen longe et late.* On the contrary a modern poet — Wordsworth, for example, or Shelley — is, in comparison, at a certain disadvantage, because his works, being all in the reader's hands, make an average impression below their highest merit. We read an ancient poem and ask, "Why has it come down to us? why is it admirable?" We read a modern poem and ask, "Is it admirable or not?" The solution must be strained from the crystals; the happy phrase is hurt by the common neighborhood of prose; and the splendor of poems in themselves without flaw is clouded by the memory of inferior performances.

No doubt there is poetry of Mr. Browning's which will live for generations; but we, his contemporaries, cannot pick out the lasting verses. Posterity is not likely to value most highly his brilliant skirmishes with unbelief and superstition, for these will be idle and hard to understand when the forms of thought and feeling with which they deal have passed away; nor his ingenious situations, for they do not consist of the simple relations which are the framework of common experience; nor his curious analysis of motives and character, for these are a surgeon's dissection after death. The future will prize, we think, a bit of sunset sky out of some landscape; a song; a burst of natural passion; a vague generalization, magically fixed by example; a speculative doctrine made by the imagination clear beyond the clearness of logical statement, — for in this order of ideas the syllogism sometimes perplexes and obscures.

"Paracelsus," once the most admired of Mr. Browning's poems, represents the youthful sentiment of its time, as "Childe Harold" represented that of another epoch. It is full of emphasis and music; but it is also diffuse and vagrant. It is the work of a young man, and, like many of the works of youth, not certain to be long remembered. "Luria" has been called the best of Mr. Browning's dramas. It is written in a noble spirit; but its plot is improbable, its lesson that virtue is sure of final recognition and applause in this world is, of course, false, and its characters are unreal, whether considered as persons or types. Yet "Luria" is an agreeable poem. The stage is adorned with the brilliant life of mediæval Italy, our best sentiments

are appealed to, and the chasms in the logic are bridged with a preacher's skill. A subtile intellect is so skilfully employed to disparage subtilty of intellect, that the reader may be pardoned for sharing the author's delight in his faculties, even to the extent of preferring to be the Italian rather than the Moor. Browning's dramas give us analyses of solitary characters, and developments of successive situations, not the continuous movement of life; hence the "Dramatic Lyrics," "Men and Women," and "Dramatis Personæ," are congenial compositions. Previously to the publication of "The Ring and the Book," we should have said that the pieces on which his fame would rest were among those thus entitled.

"The Ring and the Book," though in scope a literary novelty, is not essentially a novelty in plan. More than once Mr. Browning has performed the experiment of treating the same subject from different points of view. For example, under the obvious argument of "Bishop Blougram's Apology," stirs another more solemn argument, which bursts forth at the end in fire. Again, in "The Glove" the popular version of a celebrated story is given, but in such a way as to make the reader feel that the story is only half told, and ask for the nobler relation which follows. It is the child's game, — out of the same blocks successively to shape a triangle, a parallelogram, and a star. "The Ring and the Book" is an extended and complicated example of this method.

No incident in private life excites such general and prolonged interest as a murder. The first reports of the affair are eagerly read; contradictory facts and versions of facts are added every day; exaggerations, too gross for the newspapers, are current in conversation and increase the popular ferment. If the alleged murderer is arrested, the story of his arrest gives us fresh excitement, and we wait impatiently for the trial to begin that is to clear up the truth. What is the prosecution prepared to prove? What line of argument will be followed by the defence? Will the executive pardon? On the eve of execution did the criminal make a confession? Whatever the testimony, some will doubt the guilt, and some the innocence, of the prisoner. Some, admitting his guilt, will hold that it has not been legally proved, and others, that the provocation was enough to excuse the deed. Let the victim be a woman, young, beautiful and a mother; let a handsome young man be mixed up in the matter, as her friend and possible lover; let the murderer be the elderly husband; let the parties belong to high life; and let their relations with each other have been long talked about, — then are present the conditions of tragic interest,

"And Robert Browning, you writer of plays,
Here 's a subject made to your hand."

So the poet takes for the basis of his new work "a square old yellow book" with "crumpled vellum covers," — the fanciless, documentary, crude facts of a Roman murder-case, — pure gold. He then considers by what added matter, by what characters and motives attributed to the several persons, the story will become shapable into an artistic form, — to carry out his figure, say, a ring.

"He mingles gold
With gold's alloy, and, duly tempering both,
Effects a manageable mass, then works."

The possible versions of such a story admit of a threefold classification. First, there is the confused rumor which passes among the public from lip to ear. Secondly, there is the account of the transaction given by those who were concerned in it. Thirdly, there is the case as sifted under the forms of law. Each of these three classes may include three statements, namely, one for the alleged criminal, one against him, and one that of those who try to get impartially at the truth, — nine versions. But the story of the prisoner before the trial, when he pleads not guilty, may reasonably differ from his story after conviction, and after all hope of pardon is past. Thus the essential facts may conceivably be narrated in ten several ways; and each conceivable narration may be classed under one of ten heads. To exhaust in this manner a Roman murder case is the prodigious purpose of "The Ring and the Book." Nothing could be more unlike the incidents which Homer delights in than this story. If he had it to tell, he would tell it straightforwardly, in part by narration, and in part by dialogue. He would show each fact in several aspects before taking up the next fact, with such an interest in his work as a healthy man takes in healthy men. Shakespeare would make out of the subject a second Othello. As he unfolded the plot, and led the dialogue, all the relations of each character to the rest, being present in his mind, would be present in every situation, and felt in every discourse. The student would be left to separate them, to follow through the play the thread of each, to perplex himself among the number of possible explanations, and, perhaps, to come to the opinion that explanation of the work, as of the world, is impossible. A didactic purpose would be absent but not missed in Homer, present but not obtruded in Shakespeare. In both works the power of the author would be impalpable but obvious, like the day; but his personality, the source of his power, would be far withdrawn. Might these poets be compared to the weaver, at each throw of whose shuttle the thread runs through a crowd of figures, and discovers

their shape and proportions? Might they be distinguished from the embroiderer, who thinks of a single figure, and plies one color at a time?

Browning adopts the form of narrative interspersed with dialogue; but the narrative and the dialogue are pieces of identical pattern. The characters are different pipes of the same organ-stop; and the ten poems are resembling tunes played in one style. The poet is conscious, like Lucretius, of a didactic purpose, not indeed speculative, but ethical or religious. Homer is alive with the sentiment of race; he is moved by the legends which are the history, the religion, the life, the pride of a whole nation. Shakespeare's motive is the love of human beings; he likes to portray, without judging them. Iago and Lady Macbeth, Dame Quickly and Dogberry, are as interesting and dear to him as Brutus or Imogen. Herein, because he is the one unmoral, he is the greatest, and the one un-English, of English writers. But the cause of "The Ring and the Book" is a moral and religious lesson, —

> "This lesson, that our human speech is naught,
> Our human testimony false, our fame
> And human estimation, words and wind."

The ten poems are ten sermons on the same thesis; and each is shaped by a logical process. The story is of no account, except as it serves the poet's purpose of showing a few characters in a great variety of relations, and of illustrating his thesis. To the reader who, losing sight of the purpose of the book, should object to the repulsiveness of the theme, the poet might say, in the words of "The Statue and the Bust," —

> "O, a crime will do
> As well, I reply, to serve for a test,
> As a virtue golden through and through."

5.—*Annals of the American Pulpit; or, Commemorative Notices of Distinguished American Clergymen of various Denominations, from the early Settlement of the Country to the Close of the Year Eighteen Hundred and Fifty-Five.* By William B. Sprague, D. D. Volume IX. New York: Robert Carter and Brothers. 1869. 8vo. pp. xii., 210; xiv., 242; xi., 135; xii., 172; ix., 91.

Dr. Sprague's great work is approaching completion, only one volume remaining unissued. We call it a great work. It is so in other senses than that of bulk and weight. It is so in the energy, perseverance, and skill that have planned and executed it, in the truly generous and catholic spirit that has governed its execution, and in the em-

inent position and ability, and the wide diversity of taste and talent, to be recognized among its contributors. As some of our readers may not be familiar with the design, we will state it in brief. Many years ago Dr. Sprague — well known as a friend and lover of all good men — conceived the idea — which, strangely enough, had almost the merit of a discovery — that the chief reason why sincere Christian believers of different denominations hate one another so cordially is, that they are ignorant of one another's actual character. It occurred to him that there was no so sure peace agency among the jarring sects as the favorable introduction, to the members of each separate fold, of the foremost and best men from the other compartments of the Church. As, in this country, the clergy have been pre-eminently the *parsons* (*personæ*), or representatives, of their respective denominations, it was supposed that a series of clerical biographies would most directly accomplish the desired end. Accordingly, Dr. Sprague has brought together in these volumes the biographies of all the really distinguished members of the clerical profession in our country, from its settlement to the year when the publication was commenced. Some of these sketches he has written himself; but most of them have been furnished by relatives, friends, associates, or successors of the persons commemorated. In employing such aid, Dr. Sprague has probably expended more labor than would have been needed for collecting the materials and shaping them with his own pen; but by this method he has eliminated all personal preference and prejudice, and has insured the representation of each of his subjects in such guise as he wore in the eyes of those who knew him best and loved him most.

This work, though intended simply as a series of clerical biographies is much more. Whether for good or evil, the clergy of America, until the present generation, have made a large portion of its history. Their lives have been often eventful, and, when not so, typical and illustrative of times, communities, manners, and opinions. Their action was, till recently, hardly less conspicuous in the State than in the Church, and their social influence made itself felt profoundly and enduringly. It may, then, be easily imagined how valuable these volumes are as a repertory of general and local history, and of those details of the social and domestic life of the last two centuries which, in our day of rapid movement, are fast passing out of familiar knowledge into the department of archæology.

Many of these notices, too, are remarkable monographs, as regards literary execution, artistic skill in the grouping of characters and incidents, and vividness of portraiture and narrative. There are very few American writers of merit, of either the present or the just pass-

ing generation, who have not been pressed into the service. Indeed, Dr. Sprague's aim has been, whenever practicable, to have his materials furnished by men of established reputation, whose names would give an added interest to their subjects.

In the preceding volumes the more numerous denominations have been represented. The present volume is devoted to five of the smaller religious bodies which have obtained foothold among us by immigration, other than English, namely, the Lutheran, Reformed Dutch, Associate, Associate Reformed, and Reformed Presbyterian, — the last three names, so far as we can learn, designating distinctions rather than differences. A very large proportion of the subjects of this volume were natives of Germany, Holland, Scotland, or Ireland, came to this country as pioneers in the religious exploration of new settlements, and encountered the class of experiences which are more pleasant in the recollection than in the endurance. Though most of their names were new to us, we have found a peculiar charm in their lives; and some among them will have an enduring and favored place in the portrait-gallery of our memory. We have never read a biography in itself more noteworthy, or more attractive, than that of John Anderson, D. D., — a story that provokes alternate tears and laughter, presenting in the same man a curious commingling of the saint, the sage, and the simpleton, — one who was fit to commune with angels, and yet might have called out the pitying ridicule of a travelling tinker. We do well to catch and retain these pictures now, for the like will never again be painted. Steam and telegraph are obliterating the *piquant* eccentricities which have made our American rural and village life so picturesque. The tendency now is toward a normal type in manners, dress, habits, and character. We are thankful for every record of the times when men nursed their idiosyncrasies, and were only the more cherished and honored for them. Among the many services which Dr. Sprague has rendered to the public by his "Annals," we deem this by no means the least.

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6. — *The Study of Languages brought back to its true Principles, or the Art of Thinking in a foreign Language.* By C. MARCEL, Knt. Leg. Hon., author of "Language as a Means of Mental Culture," "Premiers Principes d'Éducation," etc. New York: D. Appleton & Co. 1869. 12mo. pp. 228.

THE title "Marcel on Language" has been made familiar to the American public by the recent discussions upon methods of classical

instruction. The work just published by the Messrs. Appleton is, however, not Marcel's great general treatise on "Language," but a smaller, introductory work upon methods of linguistic study. It would be hard to find more suggestive thoughts and practical wisdom upon this subject compressed in the same space; and we trust that this antidote will go wherever the poison of pedantry and routine has penetrated.

M. Marcel, with all his radicalism, does not, however, make the mistake of some eager reformers, who propose that we should learn Latin and Greek "as we do our mother tongue," or even as we do living foreign languages. He is careful to insist, in his chapter on Mental Culture, on the distinction as well of method as of aim to be observed in the study of the two classes of languages. There are two methods, he says, — the *practical* and the *comparative*: "the first is best suited for modern languages, the second for the ancient" (p. 169). And again (p. 180): "The ends to be attained by studying these two categories of language differ essentially; the dead languages are learned for the sake of the national idiom, the living languages for their own sake." We wish that the author had discussed the comparative method as fully and elaborately as he has the practical; his remarks upon it are judicious, but too brief, consisting rather of hints and suggestions than a systematic plan of instruction.

One point that he makes requires a word of remark. It contains an element of truth; but it is put, we believe, in a shape which confounds truth and error, and is calculated to do harm rather than good. This is, that writing exercises in a foreign language is of no use to beginners; for "common sense requires that the learner should read before he writes, so as to know what is the best usage, in order to conform to it." (p. 206.) This is very just as regards attempts at elaborate composition; but it is forgotten that the special object which the best teachers have in view, in requiring written exercises, is not to produce good Latin or Greek, but to give the pupil the best possible practice on the principles which he is from time to time learning. A boy does not really know a form or understand a rule, until he has himself used it constructively.

It is in the earlier part of the book — on the practical method applicable to the acquisition of modern languages — that our author's views possess most novelty and value. The titles of the chapters themselves give an outline of his system: *The art of reading, the art of hearing, the art of speaking, the art of writing.* Whoever does not see the reason for this order (or at least *a* reason) must turn to Mr. Marcel's own arguments; it would be impossible to state them adequately in a few lines. Nor would it be easy to select for quotation from the striking

passages we have marked, if it were not that our own observation of the absurdities of "conversation classes" makes his remarks on this head peculiarly interesting to us. "What conversation can there be between a master and his pupils? The very little that the latter could say would never afford sufficient practice to gain an extensive range of colloquial language. They meet, the one to communicate, the others to receive instruction: the former ought to speak, the latter to listen." (p. 137.)

We do not suppose, nor probably would the author claim, that the exact method he develops, unmodified, would always be the best. Many features of it indeed might not work well in practice. In especial, we hesitate to accept his plan for beginners, — translating an easy author by the aid of a literal version on the opposite page, and with no attention paid to pronunciation; that is, not reading the words aloud at all, only translating. Pronunciation he proposes to bring in later in the course, leaving it wholly aside at this stage. But we are inclined to think that the pupil, instead of acquiring no pronunciation, would be all the time acquiring a very vicious one.

We would call especial attention to the chapter entitled "The Art of Hearing." No one that has experienced the bewilderment and helplessness which even a good French or German scholar experiences in listening for the first time to foreign conversation or discourse, will think that our author exaggerates the importance of practice in the art of hearing, as a school exercise. It is true, moreover, as he says, that "if the art of reading can be acquired without a teacher, it is otherwise with hearing and pronouncing."

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7. — *Eleventh Annual Report of the Columbian Institution for the Deaf and Dumb, for the Year ending June* 30, 1868, *with an Appendix.* Washington: Government Printing Office, 1868.

In noticing the Tenth Report of this establishment for instructing deaf-mutes at the national capital, we spoke of the visit made by the president, Mr. E. M. Gallaudet to the European schools, and the effect his observations thereon were likely to produce in the American schools for deaf-mutes. We have now, in the Appendix to this Eleventh Report, the full proceedings of the Washington conference of principals of deaf-mute institutions, held in May, 1868, which largely occupied itself with the question of articulation and lip-reading as a means of teaching the deaf. Forty-five pages of the hundred and thirty-four devoted to the conference are filled with Mr. Gallaudet's

paper on "The American System" (not meaning a high tariff), and the discussion which followed it. As this discussion, in the year that has elapsed since it took place, has been succeeded by practical efforts to introduce the teaching of articulation in half a dozen of the largest American schools, it must be regarded as an important one, although in itself it added little to what was previously known to the public. Its chief merit was in bringing to the notice of gentlemen connected with the great American deaf-mute schools the remarkable success of Miss Rogers in teaching by articulation at the Clarke School in Northampton, Mass. This was done by three of the Western principals, Messrs. Gillett, Mulligan, and Talbot, of the Illinois, Wisconsin, and Iowa State institutions. These gentlemen had recently visited the Clarke School, which none of the rest had then done; they were much impressed by what they saw there, and they stated their impressions with earnestness. Notwithstanding the scepticism of Hartford and New York, their statements, taken in connection with those of Mr. Gallaudet about what he had seen in Europe, seem to have convinced the conference that something must be done, and it was resolved, in very guarded terms, that all institutions ought to provide for such instruction in articulation and lip-reading as should be found to be profitable. Not content with this, Mr. Gillett, on his return to Illinois, laid the subject before his board of trustees in a report of much more positive tenor than anything agreed upon at Washington, urging that something should be done at once to atone for the neglect in which the State of Illinois had left its deaf-mute children who might have been taught to articulate or to retain their speech. At the same time he invited Miss Rogers to visit his institution, and sent one of his best teachers to Northampton to learn by observation the methods in use at the Clarke School. This lady, Miss Trask, began the instruction of a small class in articulation at the Illinois school, last November, and has since carried it on with marked success. One evening in May last, about a year after the adjournment of the Washington conference, she gave an exhibition of her pupils before the recently appointed Board of Charities of Illinois, and in presence of a public audience. Great satisfaction was expressed with the results of her instruction thus far, which seem to be very similar to those observed in the little school of Miss Rogers at Chelmsford. She has labored with zeal and intelligence, and has more to show for it, apparently, than any of the teachers of articulation in the other large schools.

So far as we can gather from published reports and private information, the number of these new teachers is eight, namely, three in the great New York institution, with thirty-five pupils; two in the Ohio

institution, with twenty-four pupils; one in Illinois, with twelve pupils; one in Wisconsin, with about the same number; one in Iowa, and one at the Hartford Asylum. The whole number of pupils thus brought under instruction by the new method is about a hundred, probably, besides those at Northampton and in a small German school at New York, numbering nearly fifty more. The whole number of deaf-mute pupils under instruction in the country is somewhere from two thousand to twenty-five hundred, of whom at least a thousand would doubtless profit by instruction in articulation; so that less than a sixth part of those who ought to be thus taught are so at the present time. But when we reflect that three years ago there were less than a half-dozen pupils of this class in the United States, while less than one person in a thousand had any faith that articulation would be of the least value to the deaf, the revolution that has already taken place must appear surprising.

In another respect the events of the present year are worthy of notice by all who have at heart the best education of deaf-mutes. The public sentiment of Massachusetts has declared the right of all deaf children to an education at the public expense, and, in accordance with this declaration, the city of Boston has voted to open a city school for these children. Two teachers have been selected for this school, who are now preparing themselves, by a residence with Miss Rogers at the Clarke School, for beginning their work in September. The peculiarity of the Boston school will be that its pupils will live at home and only come into school for the day, while some of them will be younger than any deaf children it has heretofore been possible to secure in the large institutions. It remains to be seen what will be the success of such a school, — the first of its kind in this country. At Edinburgh, at Manchester, and at several places on the Continent, there are day-schools for deaf-mutes, but with what result, as compared with the boarding-school plan, we are not distinctly informed. We shall soon have the chance to make the comparison in the case of the Boston school, and it is not unlikely that New York, Philadelphia, Baltimore, Chicago, etc., will soon support schools of the same description.

The advantage which the Columbian Institution enjoys from its conspicuous position at Washington seems to be in part counterbalanced by the fact that it depends upon Congressional appropriations, which are now lavishly voted, and again capriciously withheld, as was the case a year ago. It is fortunate in the talents and vigor of its principal, at whose instance the conference above mentioned was called, of which he was one of the most active members.

8. — 1. *A Treatise on the Tactical Use of the Three Arms, Infantry, Artillery, and Cavalry.* By FRANCIS J. LIPPITT, late Colonel Second California Infantry, and Brevet Brigadier-General U. S. Volunteers. New York: D. Van Nostrand. 1865. 12mo.

2. *A Treatise on Intrenchments.* By FRANCIS J. LIPPITT, late Colonel Second California Infantry, and Brevet Brigadier-General U. S. Volunteers. New York: D. Van Nostrand. 1866. 12mo.

3. *The Special Operations of War, comprising the Forcing and Defence of Defiles; the Forcing and Defence of Rivers, and the Passage of Rivers in Retreat; the Attack and Defence of Open Towns and Villages; the Conduct of Detachments for Special Purposes; and Notes on Tactical Operations in Sieges.* By FRANCIS J. LIPPITT, late Colonel Second California Infantry, and Brevet Brigadier-General U. S. Volunteers. Providence: Sydney S. Rider and Brother. 1868. 12mo.

THESE Treatises are well printed, and are uniform in size and binding. They are not too large for the pocket, and their contents fit them well to be companions of those who have any taste for the subjects of which they treat, or who desire to learn something of the profession of the soldier. The work of preparing them has been extremely well done, so well, indeed, that one is not surprised to learn from the dedication of one of the volumes that the author was once a pupil of the accomplished Professor Mahan, of West Point. Their merit has been readily recognized in high quarters in this country, and they have been sold to some extent in England.

They were composed in the second and third years of our late war, in the form of lectures for the instruction of the regimental officers under the command of the author. The second Treatise is an improvement upon the first, though that is good, and the third, without being, perhaps, a better piece of work than the second, is much more interesting and attractive, as a text-book on astronomy is more agreeable reading than one on algebra.

There are two classes of persons who ought to read these books. The officers of the Regular Army constitute the first class. It would probably do no harm to the graduates of West Point now serving in the cavalry and infantry to revive the knowledge they acquired at that institution by an occasional resort to General Lippitt's Treatises. But the army of the United States is not now officered exclusively, or even mainly, by graduates of West Point. A glance at the Army Register is sufficient to show that more than half of the line officers of artillery, and more than nine tenths of the line officers of cavalry and

infantry, now in service, have been appointed from civil life. Most of them are assigned to duty at such posts that they have no inconsiderable amount of leisure at their disposal. They could hardly do better than to devote a portion of it to making themselves familiar with the contents of these books. As a rule, they owe their appointments to good service performed by them as volunteers. With the practical knowledge thus acquired, they would find it easy to master all that General Lippitt has set down, and with such additions to their attainments they would take a long step from the rank of efficient soldiers to that of accomplished officers.

The second class is composed of that considerable portion of the community which is made up of those who, whether they have served or not, have been led by the late war to take an interest in the principles of the military art and the application of those principles. Few of those who belong to this class are so well instructed that they would derive no profit from reading these volumes. The great majority would do well to read them carefully and consult them frequently. Newspapers and books have made them familiar with the principal events of our campaigns, and perhaps their reading has extended so far as to embrace the campaigns of Napoleon, or even those of Marlborough and Frederick the Great. From such reading they acquire a large knowledge of facts with but little knowledge of principles. They know that this or that battle was won or lost, that this or that place was besieged and taken or besieged in vain, and that so many men, under such and such generals, were engaged on each side, and they know little more. By an attentive reading of General Lippitt's concise, well-written, well-arranged books, they may acquire a clear insight into the unsuspected causes and reasons of many events with which they are perfectly well acquainted. By drawing his illustrations freely and aptly from the history of the late war of secession, the author has invested them, and especially the Treatise on Intrenchments and that on the Special Operations of the Art of War, with a peculiar freshness and interest for American students and readers. There is no padding in his books, they are thoroughly compact and business-like, and a familiarity with their contents tends directly to produce clear ideas and correct views. They deserve a cordial welcome, and it is to be hoped that they will receive it.

9.—*A Half-Century with Juvenile Delinquents; or, the New York House of Refuge and its Times.* By B. K. Peirce, D. D., Chaplain of the House of Refuge. New York: D. Appleton & Co. 1869.

Dr. Peirce is a kindly and eloquent preacher of the Methodist Church, who, after acting for some years as head of the State Industrial School for Girls at Lancaster in Massachusetts, became chaplain of the great reformatory of the city of New York, of which he has now written the history. It is the largest establishment of its class in the country, which is as much as to say, in the world; for, in reality, the American reformatories supported by cities and States make a distinct class among institutions of this kind. They are not prisons; yet they receive all their inmates by sentence from some court or magistrate, and they are a part of the recognized penal system of the community in which they are established. They are supported wholly or mainly by public funds, and are managed in part by public officers; yet they are generally private corporations in their form of organization, and have as yet been kept clear of the political influences which have corrupted the management of many of our prisons. This is true even in New York, where political corruption has reached its highest development; and nothing is more striking in the history of this House of Refuge, as Dr. Peirce relates it, than the high character and excellent motives of its managers from first to last. Among its founders, fifty years ago, were Dr. John Griscom, Rev. Dr. Stanford, Joseph Curtis, and James W. Gerard, and the line of succession has been kept up by good men ever since.

There is no danger, in a book such as this, that these men and their coadjutors will not receive praise enough; but there is some risk that their faults and errors of judgment may not be so clearly seen as their wise measures and the general good result of them. There is little in Dr. Peirce's book to indicate that the New York House of Refuge has any faults at all: praise is bestowed without stint; the bright side of the enterprise is the only one much considered, and the reader may easily be led to suppose that there is no other. This is natural, and, in one sense, it is commendable; for, beyond doubt, the general drift of all such enterprises is for good, and even for inestimable good. But, on the other hand, a mistake or a false principle inwrought in the structure of a benevolent establishment does all the more harm the older and stronger it grows. Such a mistake we believe the system of congregation, as practised at Randall's Island, to be; and all the piety, benevolence, wisdom, and vigilance of the men and women in authority there cannot prevent it from having hurtful results,—at any rate,

when compared with the working of a more natural system. If the managers had long ago resolved that they would never have more than two hundred children in one establishment, nor half so many when they could help it; and if they had early begun to throw off colonies and swarms from their great hive, placing them in country scenes, and where the children could readily have found homes in the families of well-to-do farmers, mechanics, clergymen, schoolmasters, and other good people, — the blessing upon their labors would be now, we believe, much greater than it is. The evil which they seek to cure springs in great part from the crowding of people in cities: the remedy for it must be sought in rustication, as far as possible; and it is possible to secure the remedy in much larger measure in a half-dozen colonies of young delinquents in the country than in one great receptacle in the city of New York. Would Dewetz ever have built his Mettroy in a suburb of Paris?

Yet we find this volume one of great interest and value. It aims at being a history, not only of the establishment to which it relates, but of the whole modern movement for the reformation of young delinquents, upon which it does, in fact, throw much light. There is a lack of method and of chronological order, and too great an infusion of mere didactical and hortatory writing, as is common with clergymen; and more prominence is given to the commonplace remarks or the excellent character of Hon. A. B., Rev. C. D., E. F., Esq., &c., than the subject seems to require. But this fault is inseparable from a work prepared as this has been, and, like the other defects of which we have spoken, indicates an amiable spirit in the author. He deserves thanks for what he has done, both as chaplain and as author.

10.—*Familiar Quotations, being an Attempt to trace to their Source Passages and Phrases in Common Use.* By John Bartlett. 5th Edition. Boston: Little, Brown, & Co. 1868. 12mo. pp. xii., 778.

We are glad to see that the appreciation of Mr. Bartlett's taste and diligence has forced him pleasantly to a fifth edition, for with every revisal his collection gains in completeness and accuracy. This is a kind of work which to do well demands time and pains, nor has the author stinted either. The very *index* has more honest labor in it than is shown by many volumes of more pretension; and, though the substance of the book be in one sense second-hand, yet the plan of it is original, and the execution demanded research and judgment. Mr. Bartlett's object has not been to supply us with ready-made learning

and impromptu felicity of allusion, but to restore the estrays of literature to their rightful owners. While he was thus in some sort acting as a detective of plagiaries, it is rather amusing that an Englishman named Friswell should have been quietly plagiarizing *him*.

In a work of this kind approximative exactness is all that can be fairly expected. Every one of these needles of wit must be hunted through the whole hay-mow of literature. To satisfy all demands, the author of a dictionary of quotations should have everything that has ever been written anywhere at the tip of his memory. And this might almost have been possible before printing had made mediocrity and dulness impervious to decay. Paper and types cheaply furnish that antiseptic which erewhile the memory of mankind secreted, drop by drop, for the royal race alone. Obscurity may now insure itself against "envious and calumniating Time" on as easy terms as genius. Mr. Bartlett often finds in forgotten books the germs of phrases which have become popular and current on the authority of some famous name. As in the Roman Carnival, some taller or more active fellow will light his taper at another, and in doing so contrive to extinguish the source of his own lustre.

> "Così ha tolto l'uno all' altro Guido
> La gloria della lingua, e forse è nato
> Chi l' uno e l'altro caccerà di nido."

Take, for example, the saying that language was given us to conceal our thoughts. Talleyrand commonly gets the credit of it, under that rule of giving unto him that hath which men are more apt to apply in the case of wit than elsewhere. Mr. Bartlett traces this bit of stolen property through half a dozen hands up to Jeremy Taylor. We shall be surprised if in some future edition he do not find the bishop's title precarious. The sentence certainly has the true Machiavellian flavor. But whoever shall turn out to be the true owner, the excommunicated bishop of Autun will prevail, we suspect, against his saintly brother of Down and Connor. *Habent sua fata ἔπεα πτερόεντα*, and this is a kind of thing Talleyrand *ought* to have said. So he will probably keep it for this generation at least, and then it will be re-fathered on the likeliest wit of the next. In such cases Coleridge's plea,

> "'T is mine and it is likewise yours,
> But, an if this will not do,
> Let it be mine, good friend! for I
> Am the poorer of the two,"

is of no avail, for it is the richer man who is apt to carry the day. Among those whom Mr. Bartlett brings into court as concerned in the

larceny of this piece of wit is Goldsmith, and we should surmise that he got it of some Frenchman. He was apt to make boot upon these natural enemies of his country as unceremoniously as Ancient Pistol. His Madam Blaise and his Elegy on a Mad Dog, were both spoils from the Gaul, and one of his most famous passages — "Like some tall cliff that lifts its awful form" — is a translation from Chapelain. From which of the later Latin poets *he* had stolen it we cannot say. The French have been great middle-men in these transactions, — it was *so* easy to give Latin a larger currency by Parisian alloy. The Romans were fair game, for in their day they had turned their *exemplaria Graeca* in more senses than one. The work of following up this floating literature is something like that of a restorer of palimpsests. You remove the English, French, and Latin layers one after another till you come to the Greek. Here Investigation, as Dr. Johnson would say, might formerly fold her hands. Not so now, for underneath the Greek lies the Sanscrit, and who knows what may turn up under that? We see Mr. Bartlett lessening down an endless Oriental vista, his eyes fixed on a quotation which flits before him like the bird in the Eastern story. There is a dreary kind of comfort in thinking that even the Greeks could say nothing that had not been said before.

But is this saying all? By no means. One of the main uses of Mr. Bartlett's book is as a lesson in rhetoric. It is the *way* of saying things that makes them immortal. The thought may be anybody's or everybody's; it will at last go by his name who had the skill to make it startle and delight us by a new melody, a word that flashed light through the very heart of it, or a turn of phrase so perfect as to seem inevitable, though all before him had just missed it. The prosperity of a verse or a sentence lies not so much in the meaning it conveys as in that murmur of memory that clings in it, as in Landor's sea-shell. Butler tells us that wit

> . . . . "is no more to be engrossed
> Than sunshine or the air enclosed,
> Or to propriety confined
> Than the uncontrolled and scattered wind."

Gray's Elegy looks down serenely on the poor devils who claim restitution in the foot-notes. We like it the better that it awakens in us these faint associations of foregone pleasure, and admire the art that could infuse light and warmth into thoughts so obvious that they had done duty on headstones time out of mind. Wordsworth's canorous verse in "Laodamia" reminds us of Virgil's *largior æther*, but only to the advantage of the younger poet. *Et tu in Arcadia!* we say to ourselves, and like him the better for having brought back a flower that

reminds us of it. We confess that we prefer Sir Roger L'Estrange's "Put nature out at the door, she comes in through the window," to the original in Horace. Churchill (as we learn from Mr. Bartlett) first compared plagiaries to Gypsies who steal children, "Defacing first, then claiming as their own." But Sheridan made the simile his own by heightening it with a dash of wit, — "disfiguring them *to make 'em pass for his own.*" We can think of no better illustration of the difference between the plagiary and the appropriator by right of eminent domain.

M. Fournier has written a book about quotations under the title of *L'Esprit des autres.* This seems to us a misnomer. It would apply well enough to the old pedants in *us*, who used to hang out their tawdry bits of the classics as the Italians on gala days flaunt from their windows every moth-eaten rug or bright-colored shred of carpet they can rummage out of their garrets. Quoting for show is as barbarous as a ring in the nose. The wit must lie in the application and belong to the quoter, as when Burke slyly applied to Wilkes chaired by the mob *numeris fertur lege solutis.* As good was Lamb's *sermoni propriora*, "properer for a sermon," applied to some of Coleridge's early poems. One of the happiest quotations ever made was by Leigh Hunt on a hair of Beatrice Cenci, which some one had given him, —

"And beauty draws us by a single hair."

The fashion of quotation seems to have gone out with ruffles. Burke was perhaps the last liberal quoter, who could do it with the free and easy air of large resources, and, like most men who draw from a full memory, he was seldom exact. Your clever quoters generally lie open to the suspicion of getting their material at second-hand. As muzzled pigs are employed to hunt truffles, so the pedants root up from the fields of Greek and Roman literature the delicacies they cannot taste, for these epicures who know how to flavor a dish with them. Burton has furnished many a *cordon bleu* with the relish that made his reputation.

A collection of this kind is in its own way a sort of phemometer or fame-gauge. But it is at the same time more exactly the measure of an author's power and felicity of expression, of his right, in short, to be an author. Shakespeare, as should be expected, leads off with one hundred and nineteen pages, Milton follows with thirty-nine, and Pope comes next with thirty-one. Dryden and Cowper have each eleven, Goldsmith musters nine, Gray eight and a half, Butler seven and a half. But under Goldsmith, Mr. Bartlett should have included passages from his prose. Some of them — like "Shakespeare and the musical-glasses," and the picture that "would have been better had the

artist taken more pains — are among the most familiar allusions. Butler also might have claimed a page or two more, selected from other poems than Hudibras. After these grandees come the commoners and yeomanry of letters. Here are the single-speech men, the dull fellows in whom the gods made incision, making them poetical for a quatrain or a distich, like Matthew Roydon, author of four golden verses, or Richard Tarlton of two proverbial ones. These are the

> "Little herde-groomes
> That kepen shepe among the broomes,"

for whose pipes made of a green wheat-stem Chaucer finds room in his House of Fame. Some of these have stolen the one yew-lamb that fills out their entire schedule of property. Matthew Henry, for example, must give back to Euripides those "second and sober thoughts," his title to which Mr. Bartlett too easily allows.* Massinger, too, must surrender "this many-headed monster" to Daniel. And we think Mr. Bartlett should have made at least one more quotation from the "well-languaged" Samuel. This stanza from his "Musophilus,"

> "And who, in time, knows whither we may vent
> The treasure of our tongue? To what strange shores
> This gain of our best glory shall be sent
> To enrich unknowing nations with our stores?
> What worlds in the yet unformed occident
> May come refined with accents that are ours?"

if it is not a familiar quotation, ought to be so at least to American ears. We confess we feel a satisfaction in making that beastly Tom Paine restore his rocket, stick and all, to the *Vasconiana* whence he stole it, though the last place where one would expect to find fireworks. But after all

> "Il faut être ignorant comme un maître d'école
> Pour se flatter de dire une seule parole
> Que personne ici-bas n'ait pu dire avant vous."

Mr. Bartlett deprives Voltaire even of the verse — *Si Dieu n'existait pas*, &c. — of which he was so proud that he quotes it several times himself.

We have thought that Mr. Bartlett was sometimes a little whimsical in denying a line or two more to certain authors, — Donne, for example. But, of course, he only can be his own judge of what quotations are familiar. He has made a very entertaining, useful, and even instructive book, and we are surprised that one man, even with the assistance he acknowledges in his Preface, could have done so much. Let every reader of it send the author his annotations, that we may at last get a book as nearly perfect as need be wished. Especially, if there be any

* Αἱ δεύτεραι πως φροντίδες σοφώτεραι. Hippol. 438.

one anywhere who knows the source of "Though lost to sight to memory dear," let him at once proclaim it, and save from suicide a score or so of hitherto baffled inquirers in all parts of the world.

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11. — *Two Years before the Mast.* A personal Narrative. By Richard H. Dana, Jr. New Edition, with subsequent Matter by the Author. Boston: Fields, Osgood, & Co. 1869. pp. vii., 470.

M. Sainte-Beuve has discussed the question *Qu'est ce qu'un classique?* with his usual taste and discrimination, and subacidulous suavity. He has drawn his illustrations, as is his wont, from ample note-books, and has given us his definition of what is a classic. But we think he has rather defined what a great book should be, than given us the direct answer to his own question. His main qualification of a classic, if we remember, is that it must be "a book that has made the human mind take a step forward." But the word should be limited to a purely literary application, and then a classic would be, not a book that lives by some peculiar property, like Gargantua, or the Anatomy of Melancholy, but simply in virtue of that pervasive quality which we call style, and which recommends it, not to this or that man, but in some degree to all men, though none may be able to give the reason why.

Shall we lay claim, then, to an American classic? If we did, we know of nobody who could put in a better title to have made one than Mr. Dana. For a quarter of a century his book has had an audience wider even than that of the martial airs of England. The boy sailor has won a place for himself on the same shelf with Robinson Crusoe. And how has he achieved this singular distinction? Not surely by the substance of his story, but by the simple and natural way in which he has told it, by the absence of all exaggeration, by such absorption in the matter that the manner takes care of itself.

But Mr. Dana was writing history without knowing it. Nowhere else can we learn so well what sea-life is (or rather used to be) to the sailor. And if time is to be measured more by change and growth than by years, his volume seems already to vie in antiquity with the Periplus of Hanno. He visits the western coast of this continent to find almost the same savage and unmanned shore, against which the first wave of the Pacific had broken. He saw what the seals alone had looked on for immemorial ages. He comes back after a score of years to find a powerful commonwealth, with a capital already wellnigh the match of modern Naples in population, and more than the match in commerce

of Venice in her bloom. There is something which singularly touches the imagination in the pages which Mr. Dana has added to his new edition. It is as if Sir Francis Drake were to look in again on the bay of San Francisco. Rip van Winkle is nothing to it. And we have become so interested in Mr. Dana's personages (we can hardly call companions those who went with him on his voyage to Dreamland) that we read the last chapter, as in a novel, to find out what becomes of all the characters. We are not going to undertake the supererogatory task of telling anybody what Mr. Dana's book is, but only to congratulate the new generation on a new edition of it, which we hope they will find as interesting at the first reading as we at the second.

12.— *The Relations between America and England: an Address delivered before the Citizens of Ithaca.* By Goldwin Smith, May 19, 1869. Ithaca: G. C. Bragdon. 8vo. pp. 19.

Before the war of the Rebellion, Mr. Goldwin Smith had been a quiet professor at Oxford, known to the outside world only by a few published lectures remarkable for their sobriety of tone, their impartiality of statement, and their simple force of style. On this side of the water his name was familiar to those who interested themselves in the contemporary politics of England, as that of an advocate of those opinions which are one day to form a common ground of sympathy for the whole English race. The questions raised, or rather forced upon immediate attention, by our war, gave him a more prominent publicity as an earnest defender of the Northern party, — in other words, of America as against Europe. In this there was entire consistency, for he was still maintaining the wise policy of not blindly opposing that steady pressure of events, no less than of opinion, in the direction of liberty and popular government, of whose inevitability his historical studies had convinced him, and of applying in our case the same principles which he wished to see applied at home. Mr. Adams, in his correspondence, had often called the attention of our government to the touching tenacity with which the operative classes in England clung to their instinctive sympathy with us through four years of privation and suffering. If Seneca could conceive of no finer spectacle for the gods than a brave man struggling in the storms of fate, we think we have had the privilege of seeing something yet nobler in those nameless millions enduring even the pangs of that last appetite, which most surely strips men to the savage selfishness of nature, — hunger, — for what they believed to be the common cause of that self-government in which they themselves were allowed no share.

But while we remember this and pay it the due tribute of our admiring gratitude, we should recollect that to the refined and sensitive there are pains more sharp than any of the body. The Lancashire operatives had at least each other's sympathy, but a professor in the great Conservative University of the old world, who was resolute that his public action should coincide with his private profession, must consent to forego that social sympathy of cultivated men, which alone can satisfy the keenest appetite of the soul. Only a brave man, and a man conscientiously brave, could do what Mr. Goldwin Smith did. Such a man is the compatriot of the high-minded everywhere, whether they agree with him or not, and America has educated us to little purpose if we have not learned that moral courage does not lose its quality by coming over the water, — that it is good in itself, and perhaps wholesomer for us, when it crosses than when it sides with our self-love.

A letter, presumably not intended for publication, written at a time when the maudlin loquacity of our ambassador had revived all the subsiding irritation of the country, when the rejection of the treaty and Mr. Sumner's speech had made even the most sober-minded Americans doubtful of the future, when it seemed to most as if the slow-match were lighted and it was only a question of time how soon its fire would reach the long-gathered magazine of war, — this letter, in which Mr. Smith expressed fears that a fortnight might as easily have justified as confuted, drew upon him something like contemptuous obloquy from the whole press of the country for which he had endured something like a social ostracism. It was not, then, the truth that we loved, but only so much of it as flattered ourselves? It was not the champion of principle that we honored, but the advocate of our party? For our own part, we honor that man most highly who is willing to tell both sides what he thinks, who is so absorbed in whatever opinion he has deliberately espoused as to forget whatever relation it may have to his own interests. We did not think this particular letter of Mr. Smith's a judicious one to be published. As a private letter (and such we suppose it to have been), it was nothing blameworthy. But had it been ten times less judicious than it was, we are not of those who can forget years of self-sacrificing and courageous service for a single mistake.

Of Mr. Smith's speech we shall only say here that it seems to us a model of dispassionate discussion, where passion were so much cheaper than reason. It was as an Englishman, and only as an Englishman, that he was able to help us in our need, but it was as an Englishman jealous of the honor of England. It is by precisely such an Englishman that we are glad to see the other side of our argument with Eng-

land stated in all its force. Mr. Smith is giving his unpaid service to education in this country, but he has not surrendered, with the other luxuries of Oxford, his love of truth and justice. Whether we agree with him or not, — and we reserve a discussion of the Alabama question for another occasion, — we thank him for a manly and undistempered argument as plain as good business English can make it. During the war we could see only one side. The war over, it will be wise for us to recognize that there are sometimes two.

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13. — *The Blameless Prince, and other Poems.* By Edmund Clarence Stedman. Boston: Fields, Osgood, & Co. 1869. 12mo. pp. viii., 192.

Several years ago, we commended Mr. Stedman's *Alice of Monmouth* to the friendly appreciation of our readers. His recent volume justifies the favorable augury we drew from its predecessor. It proves greater maturity and the care that comes of it. The leading poem shows both delicacy and depth of conception, but it is too long, and is disfigured here and there by that spotty intensity of color which it is the fashion nowadays to substitute for the fulness of tone of the elder masters. But it has beautiful and pathetic passages, and is altogether so good that we wish it were as good as the author could have made it. It has faults which are not proper to Mr. Stedman, who is capable of simplicity and directness. The narrative is too much swamped in reflection. Many of the smaller poems are full of graceful sentiment limpidly expressed. We do not know where fancy, or its application to the sweetening of work-day life, has been embodied with more refined cheerfulness than in "Pan in Wall Street," and the poems drawn from outward nature are, as they should be, landscapes infused with sentiment. Mr. Stedman has the skill to bring us into sympathy with his own feeling, — a feeling always pure and in the best sense homely. His volume is a real addition to our better literature. We were especially interested by the specimens of his translation of Theocritus. A good version of this truly charming and original poet is greatly wanted in English. Mr. Stedman we feel sure, would succeed in giving us the standard one. We should only caution him to make his hexameters as easy of scansion as possible by the unlearned ear. This verse in English must follow German, and not Grecian or even Roman, models.

LIST OF SOME RECENT PUBLICATIONS.

1. The Elements of Theoretical and Descriptive Astronomy, for the Use of Colleges and Academies. By Charles J. White, A. M., Assistant Professor of Astronomy and Navigation in the United States Naval Academy. Philadelphia: Claxton, Remsen, and Haffelfinger. 1869. 12mo. pp. 272.

2. The Villa on the Rhine. By Berthold Auerbach. Author's Edition. New York: Leypoldt and Holt. 1869. 2 vols. 12mo. pp. 990.

3. The first Six Books of Homer's Iliad; with Explanatory Notes. By James R. Boise, Professor of Greek in the University of Chicago. Chicago: S. C. Griggs & Co. 1869. 12mo. pp. 235.

4. Our New Way Round the World. By Charles Carleton Coffin. Boston: Fields, Osgood, & Co. 1869. 12mo. pp. 524.

5. Elements of Latin Grammar, for Schools. By Albert Harkness, Ph. D., Professor in Brown University. New York: D. Appleton & Co. 1869. 12mo. pp. 156.

6. Problematic Characters. A Novel. By Friedrich Spielhagen. New York: Leypoldt and Holt. 1869. 12mo. pp. 507.

7. Studies in Philosophy and Theology. By Joseph Haven, D. D., Professor in Chicago Theological Seminary. Andover: Warren F. Draper. 1869. 12mo. pp. 502.

8. The Mississippi Valley; its Physical Geography. By J. W. Foster, LL. D. Illustrated by Maps and Sections. Chicago: S. C. Griggs & Co. 1869. 8vo. pp. 443.

9. Reminiscences of Felix Mendelssohn Bartholdy. By Elise Polko. Translated from the German by Lady Wallace. New York: Leypoldt and Holt. 1869. 12mo. pp. 334.

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42. The Public Records of the Colony of Connecticut, from August, 1689, to May, 1706. By Charles J. Hoadly, Librarian of the State Library. Hartford: Press of Case, Lockwood, and Brainard. 1868. 8vo. pp. 574.

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Art. I. — The Genesis of Language.

If the revival of Greek learning in Erasmus's time has been appropriately termed the "new birth" of the European intellect, we may signalize, as a hardly less astonishing renaissance, the consequences which in our own day have flowed from the renewal of intercourse, after a separation of perhaps fifty centuries, between the oldest and the youngest members of the Aryan race. By the English conquest of India our horizon of speculation has been vastly and suddenly widened. Our ethnologic doctrines have undergone extensive remodelling. Our inquiries into the course and conditions of human development have assumed a broader aspect. The myths and fairy-tales of Indo-European antiquity, — the weird fancies of primeval nature-worshippers, previously unintelligible, — are now seen to be fraught with marvellous significance. While, with regard to the science of language, it will suffice to mention that, in the sixty years which have elapsed since the publication of Schlegel's *Weisheit der Indier*, we have traced a large proportion of the grammatical forms in the Aryan languages back to their primitive significations; that we are now in possession of a method by which, after due inspection, we can classify all dialects, spoken or written, living or dead; that we have begun to obtain trustworthy evidence as to the civilization, the domestic life, and the intellectual habits of our ancestors, many ages before the dawn of authentic history;

that we have deciphered the long-forgotten idiom in which the mythical Zarathustra proclaimed to his Bactrian countrymen the religion of light; and that we can read, through the wedge-shaped symbols in which they are engraved, the royal edicts of Dareios Hystaspes, containing the same courtly titles which the exiled Themistokles may afterwards have used in his daily salutations to the Achæmenid monarch.

It is hardly necessary to say that these splendid results are not due merely to a series of happy guesses. They have been obtained by the patient examination of paradigms and vocabularies, by the careful analysis of grammatical forms, and the study of phonetic changes, conducted for the most part in strict accordance with inductive methods. Etymology is no longer, as in Voltaire's day, a science in which consonants go for little and vowels for nothing; but it is a science in which every change of vowel or consonant must be referred to general, albeit empirical, principles of utterance. The time has gone by for such linguistic feats as those performed by Blackstone, who derives *parson* from *persona*,* because the parson impersonates the church, and Webster, who, without a twinge of compunction, derives *preach* (Lat. *prædicare*) from the Hebrew *barak*, "to bless"! In striking contrast to such proceedings, we now find scholars like Max Müller refusing to admit the identity of such words as *cura* and *care*, *corvus* and *crow*, ὅλος and *whole;* the similarity, which formerly led so

* A derivation which Worcester cites without the least suspicion of its absurdity. *Parson* is a compression of *parochianus*, "one belonging to a parish." He who seeks good etymologic wheat in our popular dictionaries is likely to get sorry chaff for his pains. Mr. Crabbe, for instance, tells us that the good old Saxon *doze* is "a variation from the Fr. *dors*, and the Lat. *dormio*, 'to sleep,' which was anciently *dermio*, and comes from the Greek δέρμα, 'a skin,' because people lay on skins when they slept." (! !) English Synonymes, s. v. "Sleep." Strange that he should have forgotten the Hebrew *damam*, "to keep silence"; nay, what more apposite than *dabhar*, "to speak," for people sometimes talk in their sleep! In a similar mood, M. Benci, a sapient Italian critic, has derived *giorno* (Lat. *diurnus*) from O. H. G. *horn*, because the Alemans and Franks announced the arrival of day by blowing a horn! See Lewis, Romance Languages, p. 220. Most of the ancient etymologies were thus obtained from a mere play upon the sound of words. See instances in Lersch, *Sprachphilosophie der Alten*, III. 113, 184, and elsewhere; and compare the derivation of *Agamemnon* from Ἀγαστὸς ἐπιμονῇ in Plato's *Kratylos*, XIV., and that of Φίλιππος from פִּי לַבִּיר *piy lapidh* = στόμα λαμπάδος, in Philo. See Gesenius, *Gesch. d. Hebräischen Sprache*, § 23; Lobeck, *Aglaophamus*, pp. 867 – 869.

great a scholar as Buttmann to assert the kinship of such words, now constituting the chief obstacle to an admission of their common origin. For it has been ascertained that, as a general rule, when a word begins in Greek or Latin with a tenuis, it cannot, in English (unless directly imported from those languages), have the same initial letter, but must begin with the kindred aspirate. Thus we have *καρδ-ία* = *cor-d* = *heart*, *cornu* = *horn*, *trĕs* = *τρεῖς* = *three*; *tu* = *thou*; and it is therefore stated that if *cura* and *corvus* are to be discovered in English, they must be sought among words beginning with *h*, not among words beginning with *c* or *k*, while *whole*, if it existed in Greek, could hardly be anything else than *κόλος*. It may indeed turn out that a too obstinate adherence even to Grimm's Law may, in some cases, be proof of rashness, since it is, at best, an empirical generalization, which has from time to time encountered serious exceptions.* Nevertheless, the mere fact that such plausible derivations are so vigorously challenged, and obliged to search so narrowly for proofs of genuineness before they can be accepted, shows forcibly that in etymology mere guess-work is no longer permissible,† and that in tracing the pedigree and kinship of words, similarity in sound, even when accompanied by identity of meaning, is by no means an infallible criterion. Words starting from the remotest sources have not seldom been ground down into exactly the same shape. If we have never heard the French *souris*, "mouse," identified with *souris*, "smile," it is doubtless because no one has had a pet theory to

* See Guest's criticisms in Proceedings of the Philological Society, III. 179, fol'g. Many exceptions to Grimm's Law are only apparent. The Zend *thri* (English *three*) may appear anomalous when compared with Sanskrit *tri*. But it follows the peculiar rule in Zend that *y*, *r*, *w*, *m*, *n*, and the sibilants, roughen a preceding tenuis; as *ughra* for Sanskrit *ugra*; *pathnĭ* for Sanskrit *patni*. See Spiegel, *Altbaktrische Grammatik*, p. 71. Buttmann's identification of *whole* and *ὅλος* must be given up, no doubt; but I cannot agree with Müller as to *corvus* and *cura*. In the older Roman orthography, *c* is used to represent the medial sound of *g*, and *q* is the only tenuis guttural; so that *corvus* and *cura*, being pronounced *gorvus* and *gura*, are brought into strict conformity with the law which they have been supposed to violate. Even in later times we find continual confusion between *Caius* and *Gaius*, *Cnæus* and *Gnæus*. Compare Donaldson, *Varronianus*, p. 292.

† "Armenian *hayr* is the same as Lat. *pater*, not because, as a general principle, *p* is changeable into *h*, but because it can be proved by facts to be so in Armenian, where *pes* (foot) is *het*; *pancha* (five) is *hing*; *πῦρ* (fire) is *hour*." Müller, in Bunsen's Outlines, I. 327.

support by so doing;* yet the one comes from *sorex*, the other from *subridere*. The word *page*, meaning the side of a leaf of paper, is from Lat. *pagina;* but the word *page*, meaning a youthful domestic servant, is from Gr. παιδίον, "a child" or "lad." So the Fr. *feu*, "fire," is a compression of Lat. *focus;* but the word *feu*, used in alluding to persons lately deceased, was formerly written *feulx*, which shows its original shape to have been Lat. *felix*, as the Greeks used ὁ μακαρίτης in speaking of the dead. So the Gr. ἰός, "arrow," has nothing to do with ἰός, "poison"; for the one is represented in Sanskrit by *ishu*, the other by *visha*, Lat. *virus*. In all such cases we have, as Cobbett said, "the same combination of letters, but not the same word." On the other hand, words growing from the same primeval root have been modified by the acquired and inherited phonetic peculiarities of the various races who have used them, until all traces of their original identity have disappeared. The identity of such words as *tear* and *larme*, *pen* and *feather*, has been too often illustrated to require demonstration here. A hardly less striking instance, though the identity is not quite so complete, is furnished by the words *wanton* and *uneducated*. In the first place, the prefixes *wan* and *un* are the same, our old words *wanluck*, *wanthrift*, *wantrust*, being simply *unluck*, *unthrift*, *untrust;* as may be seen by comparing the Dutch *wangeschikt* and *wanorde* with Germ. *ungeschickt* and *unordnung*. In the Scandinavian tongues this prefix appears as *van*, as in the Danish *vanskabning*, "a monster," *vanartig*, "depraved." † The second root, *ton*, brings us at once to Dutch *towen*, Germ. *gezogen*, from *ziehen* = Eng. *tow* = Lat. *duc-o* = Skr. *duh*, which forms the essential element of the word *uneducated*. Even in cases where diversity of sound is attended with apparent incompatibility in meaning, the original identity is often clearly traceable. There is nothing in the condition of *slaves* to sug-

* Some writers have actually attempted to connect *louer*, "to hire," with *louer*, "to praise," because you praise lodgings when you let them! The one is from *locare*, the other from *laudare*. See Müller, Science of Language, II. 306.

† See Key's interesting paper on Alpha privative, in his Philological Essays, p. 146. This destroys Archbishop Trench's derivation of *wanhope* from "waned hope." The prefix is the same as in the words above cited, where there is no reference to "waning."

gest or justify an association with the Greek word for "glory." Yet *slave* (Russian *slava*, Irish *cliu*) is not simply allied to κλέος (originally κλέϝος), but it is absolutely the same word, as pronounced by the vocal organs respectively of a Greek and a Russian. It appears in the self-imposed title of the *Sclavonic*, or "glorious," races, and owes its present degradation to the extraordinary number of prisoners of war which, in the Middle Ages, these nations furnished to the Franks.*

These examples show how materially the progress of linguistic science during the present century has affected the solution of such problems as the one with which we now purpose to deal, concerning the genesis of language. It was easy for writers like Herder and Condillac, Monboddo and Stewart, to weave gossamer theories of the origin of human speech, so long as their reasonings were not controlled by unyielding facts. But as soon as Bopp, in 1816, had shown that inductive philology, like other sciences, can be successfully dealt with only by adhering to fixed methods, it began to be felt, if not consciously perceived, that inquiries into the origin of language must be postponed until a more thorough knowledge of the laws of its present structure should have been obtained. So vast is the field of linguistic phenomena, so numerous and delicate the processes required for its successful exploration, that during many years the efforts of scholars have been almost exclusively devoted to the establishment of subsidiary inductions, while that which in the last century was considered the grand problem of the linguist has been quite neglected, or even treated with disdain. Müller tells us that "the *Société de Linguistique* lately founded at Paris, and including the names of the most distinguished scholars of France, declares in one of the first paragraphs of its statutes that it will receive no communication concerning the origin of language." This spirit of caution has undoubtedly been of decided advantage to the progress of the science,

* See Gibbon, Decline and Fall, VII. 104 (Paris ed.). The name *Welsh* seems at one time to have run risk of sharing a similar fate. In an Anglo-Saxon treaty of the tenth century, *wealh*, "Welshman," is used in the general sense of "slave." See Freeman, Norman Conquest, Vol. I. p. 306, note.

and has spared us the infliction of many volumes teeming with crude etymologies and cruder philosophy. But the time has now come when it is not only possible but desirable for us to proceed more boldly. The inductions of philology are now broad and firm enough to sustain a goodly edifice of linguistic philosophy. The question of origin, in language as in other subjects, is one which presses for solution; and it is one in which analytic inquiries into the structure of words will be found to offer powerful assistance.

It is proposed, therefore, in the present essay, to sketch the primitive shape and structure of human speech, and to examine, so far as our scientific resources will permit, the further question as to how these primitive elements originated. The former inquiry must necessarily precede the latter. For to endeavor, from a mere contemplation of existing dialects, to point out the origin of language, would be as absurd and hopeless a task as to seek the laws of primeval nebular condensation by a simple scrutiny of our solar system in all its present complexity.

I.

At the outset, the old hypothesis of a single primitive language, from which all existing forms of speech have been derived, may be set aside without ceremony, as being not only unsupported, but even discountenanced by all the evidence which philology can bring to bear upon the subject.

> Οὐ γὰρ πάντων ἦεν ὁμὸς θρόος οὐδ' ἴα γῆρυς,
> ἀλλὰ γλῶσσ' ἐμέμικτο, πολύκλητοι δ' ἔσαν ἄνδρες.*

Not only is it impossible to imagine a single dialect from which the Aryan and Semitic families, the Chinese, and the innumerable languages of Central Asia, South Africa, Polynesia and America, could alike have sprung, but the whole course of philologic research down to the present time points to the conclusion that originally there were as many forms of speech as there were tribes or families of men. The primitive state of

* Iliad, IV. 437. "Eine so zu sagen materielle Abstammung aller Sprachen von einer einzigen Ursprache können wir als unmöglich voraussetzen." Schleicher, *Die Darwinsche Theorie*, p. 21. Compare Büchner, *Science et Nature*, I. 194; Whitney, Study of Language, pp. 383, 394; Renan, *Langues Sémitiques*, I. 101, 102; F. Schlegel, *Bibliothèque Indienne*, I. 281; *Weisheit der Indier*, Th. I. Kap. iv.

things must have resembled that which we now find among the brute-like black races of the Indian Archipelago, where each little group of men and women has its own vocabulary, unintelligible to all its neighbors, and where even in a single family the language changes so rapidly that grandparents cannot understand their grandchildren. It is becoming generally recognized by philologists that a definite and stable language cannot arise until there has been a concentration of men into large tribes or states. The notion of a single primitive dialect was well suited to the hypothesis that the human race is descended from a single pair of ancestors, who were originated in some other way than by the ordinary process of birth. But in view of the flood of light which has been thrown upon the origin of mankind by the researches of Darwin, Lyell, and Huxley, such a conception is no longer tenable. Speculations like those of Donaldson (*Maskil le-Sopher*, p. 35) as to the course taken by the families of mankind in descending from the mountains of Armenia, a few thousand years ago, can now serve only to amuse us. The origin of the human race has been taken quite out of the hands of the philologist, and set back thousands of centuries, into the later tertiary epoch, when tigers, primeval elephants, and gigantic reindeer roamed at large over Western Europe. We are thus confronted by the conception of a vast, apparently almost limitless past, during which men struggled for existence with stronger but less cunning brutes, and during which there could have been neither political concentration nor organized tradition, and therefore no individualized language.*

This conception explains the signal failure of all the attempts which have hitherto been made to construct a universal genetic classification of languages. Of the Semitic, Aryan, and Dravidian dialects, possibly also of the Altaic or northern division of what Max Müller calls the Turanian family of tongues, we can respectively affirm that they must have started from a

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* See, in this connection, the profound and striking remarks of the Platonic Protagoras, and, in particular, the following: *ἐζήτουν δὴ ἀθροίζεσθαι καὶ σώζεσθαι κτίζοντες πόλεις· ὅτ' οὖν ἀθροισθεῖεν, ἠδίκουν ἀλλήλους, ἅτε οὐκ ἔχοντες τὴν πολιτικὴν τέχνην· ὥστε πάλιν σκεδαννύμενοι διεφθείροντο.* Plato, Protag. 322. Compare Republic, I. 351, C.

single primitive Semitic, Aryan, Dravidian, or Altaic language. It has become a trite remark that, if all Roman history were lost in the night of oblivion, we should still be certain that there was once a time when French, Italian, and Spanish were but one and the same language. So, in spite of the absence of historic records, we know with absolute certainty that English and Russian, Greek and Sanskrit, were once but one definitely-formed language; and we can even determine with considerable confidence what the forms of that language were.* But when we come to the continent of America, we find that among its vast hordes of languages no such genetic solidarity can be established. Iroquois and Algonquin, Totonac and Maya, do not present such signs of cousinship as Teutonic and Iranian, Syriac and Ethiopic, Telugu and Canarese. We can therefore, indeed, make an American group, the members of which are characterized by morphological resemblances, but we cannot make an American family, as we make an Aryan or Semitic family. We cannot point to a single individualized mother-tongue from which the twelve hundred and sixty-four American dialects enumerated by Adelung might have started. This is because there has been no great political concentration, resulting in a wide-spread organization of linguistic traditions, among the American aborigines. Their hundreds of dialects have gone on from the beginning, unstable and fluctuating, never attaining such an organic shape as the mother-Aryan or mother-Semitic. The principle of genetic classification, therefore, which Bunsen and others have attempted to apply universally, has in reality but a narrow range of applicability, being available only in the case of languages which have been spoken by concentrated tribes or nations.

The foregoing remarks will prevent the suspicion, which

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* This restoration of an extinct language — as Cuvier or Owen would reconstruct some fragmentary fossil from indications furnished by a few scattered bones and teeth — is now rapidly going on. We have already a lexicon of the Aryan mother-tongue. Fick, *Wörterbuch der indo-germanischen Grundsprache in ihrem Bestande vor der Völkertrennung*, Göttingen, 1868, 8vo, pp. 246. It is said that the great philologist Schleicher (whose recent untimely death every scholar must deplore) even meditated composing a tale in this long-lost dialect. See also the Memoir by G. Curtius, *Zur Chronologie der indo-germanischen Sprachforschung*, Leipsic, 1867, 4to, pp. 77.

might otherwise arise in the course of the inquiry, that we are striving to reach that El Dorado of linguistic research, — the proof of a common origin of the materials of all languages. We do not believe in any such common origin. But with regard to the grammatical formation of language, with regard to its morphological structure, the case is wholly different; and we are now about to enter upon a long and somewhat intricate course of argument, to prove that all languages must have been originally formed upon one and the same ascertainable type.*

Whoever begins to study French, after a previous acquaintance with Latin, will find that he can speedily, without the help of a dictionary, detect the meaning of many words, not from their identity with the corresponding terms in Latin, but from the fact that they are nearly all abbreviated or contracted with extreme uniformity of method. Thus the meanings of *mois* and *église* are at once apparent from the directness with which they suggest the Latin *mensis* and *ecclesia;* and similarly we have such words as *mater*, *magister*, *dicere*, *duodecim*, *redemptio*, *spiritus*, and *salvere*, becoming in French, *mère*, *maître*, *dire*, *douze*, *rançon*, *esprit*, and *sauver*. We also find the Latin consonants vocalized, and particularly we are called upon to note the frequent change of *al* into *au*, as in *chaux* from Lat. *calx*, and *au* from *ad illum*, Span. *al*. As Trench quaintly expresses it, "The French devours letters and syllables." But the same is true of Spanish, where *doña*, *mas*, and *creer* have come from *domina*, *magis*, and *credere;* and of Italian, where *oggi*, *vegliare*, and *verno* are the modern representatives of *hodie*, *vigilare*, and *hibernus*. In similar wise the Anglo-Saxon *hafoc*, *hlaford* and *Eoforwic* have become *hawk*, *lord*, and *York;* and we have *candela* = *candle*, *kyriake* = *church*, *diaconus* = *dean*, *regula* = *rule*, *uncia* = *inch*, *sacristanus* = *sacristain* = *sexton*. The same general phenomena of contraction are to be seen in the Pali, Prakrit, and Kawi, as compared with Sanskrit.† In the rabbinical Hebrew of the

* "Wir setzen desswegen eine unzählbare Menge von Ursprachen voraus, aber für alle statuiren wir eine und dieselbe Form." Schleicher, *Die Darwinsche Theorie*, p. 23.

† Burnouf et Lassen, *Essai sur le Pali*, pp. 140, 187; Lassen, *Institutiones Linguæ Pracriticæ*, p. 59, fol'g.

Mishna, as compared with classical Hebrew, and in the Galilæan and Mendaïte dialects, as compared with the old Aramæan, the same tendency to the vocalization of consonants and compression of syllables has been noticed. In the Samaritan and Chaldee there is a vocalization of the gutturals, as in the English words *plough*, *night*, and *daughter*. And in the Mahri of Southern Arabia we find the regular change of *l* into *u*, as in French, besides which so many letters and syllables have been devoured that the Semitic character of the language is at first sight hardly apparent. Similar results are obtained from the comparison of Amharic with old Ethiopic, and of the colloquial Arabic of the Bedouins with the classical idiom of the Koran, while the Syriac has obliterated its roots to an extent hardly paralleled even by the French. Vocalization and contraction, therefore, — processes which tend to facilitate the enunciation of words,* — may be regarded as a distinguishing feature of linguistic development. These co-operating processes have been minutely described by Müller, and are regarded by him as symptoms of "phonetic decay," "relaxation of muscular energy," "laziness," "effeminacy," and "linguistic disease." † I am unable to see any good reason why terms implying censure should be used to describe such a process, unless it be the principle, too thoughtlessly assumed by many philologists, that in the history of language everything old is right and everything new is wrong. There are, doubtless, certain cases in which "phonetic decay" impairs the perfection of a language; as for instance when it produces such ill-distinguished forms as *pair* and *pear; thyme* and *time; rite*, *wright*, *right*, and *write;* Fr. *ver*, *verre*, *vert*, and *vers; sang*, *cent*, *sans*, *sent*, *s'en*. The evolution of language being, as we have elsewhere shown,‡ a change from indefinite homogeneity to definite heterogeneity, it follows that the most

* "Alle Veränderung der Laute, die im Verlaufe des sprachlichen Lebens eintritt, ist zunächst und unmittelbar Folge des Strebens, unseren Sprachorganen die Sache leicht zu machen. Bequemlichkeit der Aussprache, Ersparung an Muskelthätigkeit ist das hier wirkende Agens." Schleicher, *Die Deutsche Sprache*, p. 49.

† Müller, Science of Language, II. 199, 212, and elsewhere.

‡ In a paper on "The Evolution of Language," in the North American Review, October, 1863. I am pleased at finding similar views as to the usefulness of "phonetic decay" in Professor Whitney's Study of Language, p. 74.

highly differentiated dialect, in which distinct words can always be furnished for distinct ideas, is the most perfect as an instrument of thought. When therefore a letter exercises a differential function, or serves to distinguish one word from another, its elision constitutes a retrograde step toward homogeneity. If the process which has converted *laudare* and *locare* alike into *louer* were to go on unchecked, our modern languages would in a few centuries become somewhat like those Indo-Chinese dialects in which the same combination of vowels and consonants is obliged to serve for twenty or thirty quite different ideas.* But when a letter no longer exercises a differential function, its elision constitutes in most cases a step in advance. For one instance in which so-called "phonetic decay" interferes with the proper differentiation of language, there are many in which it assists it, as the following table will show: —

From Lat. *captivus*, the French has *chétif*, and *captif*,

separare,	*sevrer*,	*séparer*,
sollicitare,	*soucier*,	*solliciter*,
disjejunare,	*dîner*,	*déjeûner*,
paganus,	*payen*,	*paysan*,
strictus,	*étroit*,	*strict*,
homo,	*on*,	*homme*,
ministerium,	*métier*,	*ministère*.

It is to "phonetic decay" that we owe in English such parallel forms as *blaspheme* and *blame; regal* and *royal; cadence* and *chance;*† *persecute* and *pursue; redemption* and *ransom*; *esteem* and *aim; diary*, *diurnal*, *journal* and *journey*. It is "phonetic decay," moreover, which has made most of our familiar words short enough to be conveniently pronounced.

* So, when a word discharges a differential function, it is an injury to the precision of language to assimilate its meaning to that of another word. Synonymization is a symptom of linguistic degeneracy. Pretentious blunderers, for whom the legitimate resources of our incomparable English language would seem to be insufficient, who use *transpire* in the sense of *happen*, *alone* in the sense of *only*, *potential* in the sense of *powerful*, and *predicate* in the sense of *predict*, are inflicting great damage upon the clear expression of thought. The reader will find some judicious remarks upon this subject in Mill's System of Logic (4th ed.), Vol. II. p. 233.

† In Craik's English of Shakespeare, p. 179, *chance* is absurdly derived from *casus*, strengthened by *n*.

It was certainly no advantage to the speakers of Sanskrit to be obliged to say *yushmabhyam* for "to you"; the Provençal *deserenan* is infinitely preferable to its clumsy parent, "de ipsa hora in antea"; and the French *dorénavant* is better than "de hora in ab ante." Nor is it easy to admit that our modern mouths have degenerated because they are no longer able to enunciate such frightful gutturals as the digamma, with its labial and sibilant admixtures, or the Welsh *ll*, or the Arabic *ghain*, which we will not attempt to describe. In short, that economy of nervous energy which has been shown by Spencer to be one of the chief desiderata of style is paralleled by the economy of nerve-force aimed at in the gradual concentration of the elements of words. Such economy can with no more propriety be termed "laziness" than buying in the cheapest market can be called "stinginess." I shall, therefore, throughout the present discussion, substitute for "phonetic decay" the term "integration," which, without implying either praise or disapproval, accurately describes the process by which the constituent elements of a word tend to become more and more intimately united.*

Questions of terminology become important when they are liable to influence our opinions; and the importance of the present question is made manifest when we find Müller, who knows better, declaring that, "on the whole, the history of all the Aryan languages is nothing but a gradual process of decay!" † We shall presently show good reasons for believing that the history of the Aryan languages, and indeed of all others, is the history of a gradual process of *integration*, and that in this apparently insignificant phenomenon of syllabic contraction, we have the key which can be made to unlock some of the deepest secrets of language.

For we are now to show that all the inflectional modifica-

* Instances of real corruption, or disintegration, are to be seen in the following English words adopted into Kafir: *baptize* becomes *bapitizesha; gold* = *igolide; camel* = *inkamela; priest* = *umperisite; apostle* = *umposile; sugar* = *isugile.* Appleyard, Kafir Grammar, p. 89. So, in Arabic, *Plato* becomes *Iflatun.* The Sanskrit *Krishna* becomes, in Tamil, *Kiruttinan;* and, in Chinese, *Christ* is disintegrated into *Ki-li-sse-tu.* Endlicher, *Chinesische Grammatik*, p. 22; Caldwell, Dravidian Grammar, p. 138. Compare the Basque *arrapostua* from Lat. *responsum.*

† Science of Language, I. 234, 283; but compare II. 261.

tions of the Aryan languages, expressive of the most delicate distinctions of thought, were produced by integration. The contraction of Lat. *avicellus* into Ital. *uccello* and Fr. *oiseau*, is but the continuation of the process which primevally integrated the crude elements *avi-c-ulu-s* into a single definite word. The change of *sufferre* into *souffrir* is but the completion of the process by which *sub* and *ferre* originally coalesced. It is not true that the inflectional languages have "passed their period of growth," and "entered into the stage of phonetic decay." (Müller, II. 33.) It is the same process of integration or differential contraction which first builds up a synthetic language, and then pulls it down to form various analytic dialects, just as it is the same eternal washing of the sea which now builds up a continent out of agglutinated sediment, and then wears it down again, that from the *débris* thereof new and more fertile land may be constructed. The first great achievement of modern philology was the discovery that all our inflectional syllables and dependent words were once separate and independent. The so-called root *am* of *amabit* was once, as we shall presently see, a word used by itself, the connecting vowel *a* was a second independent word, the tense-sign *bi* was made up of a third and a fourth, and the personal ending *t* was a fifth. Where there is now but one word, there was originally a phrase consisting of five words; and the process which has made *amabit* out of *am*, *aya*, *fu*, *ya*, and *ta*, is in no respect different from that which has made the Fr. *encore* out of the Lat. *hanc horam*, which has changed the ferocious *par-la-mort-de-Dieu* into the innocent *morbleu*, and ground down the pentasyllabic *mea domina* into the terminal letter of *Yes'm*.

The method by which integration operates in building up inflected words needs but a brief description. Of many words coming after one another in the same sentence, some are used less on their own account than to add precision to those which they precede or follow. After the word *house* the primitive employer of language finds it better to add the word *interior*, signifying that what he is talking about goes on inside of the house, than to indicate the same circumstance by a shrug or gesture. Thus *house-interior* is his rude contrivance for a locative case. But *interior* may be used also with other words,

with *boat*, or *tankard*, or *head*, until its independent significance grows dim in consciousness, and it is no longer felt to have any other than a modifying or determinative effect. In the ancient Chinese, *uo-li* meant "house-interior," and the power of *li* was as distinctly felt as that of *uo;* but in modern Chinese, *li* has ceased to be used alone. It has become what the Chinese grammarians call an "empty word"; it no longer means anything by itself, but, taken in connection with *uo*, it gives to the compound the signification "at home." In Chinese the integrating process has never gone farther than this. But in most languages the added word, which is no longer felt to be independently significant, becomes clipped and mutilated in pronunciation, and is at last blended indistinguishably with the word which it serves to limit. In the Aryan languages this process may be observed in all stages of completeness. In early Aryan literature the phenomena of tmesis, usually shown in the separation of the preposition from the verb, are instances of imperfect integration. Thus, in the Veda, we have *sam agnim indhate narah*, "men kindle fire," where *samindh* means "kindle"; and in the Homeric poems we are continually meeting such expressions as περὶ τεύχε' ἔπουσιν (Il. XV. 555), διὰ δ' ἔντερα χαλκὸς ἤφυσ' (Il. XIII. 507), where the verbs are περιέπω and διαφύσσω.* That these are really instances of imperfect union of the elements of words is shown by the famous "*cere* comminuit *brum*" of Ennius,† and by parallel examples from the Romanic languages. Sir G. C. Lewis has shown that the adverbial suffix *ment* was originally the ablative of the Latin *mens;* as we find in Ovid "insistam forti mente," and in Apuleius "jucunda mente respondit." In the Provençal "e *suau* e *causidament*," and in the Spanish "*clara* y *concisamente*," the word has become a mere suffix, but is still liable to tmesis. But in Ital. *largamente*, *altamente*, Fr. *largement*, *hautement*, the suffix is thoroughly fused with its governing root, and its separate power is lost.‡ So the Greek augment has utterly lost its independent life, but in the oldest

* For the curious expression, ἐπὶ δ' ἀσπὶς ἐάφθη, Iliad, XIII. 543, see Buttmann, *Lexilogus* (ed. Fishlake), p. 242.

† Cf. "*Septem* subjecta *trioni*." Virg., Georg. III. 381.

‡ Compare *maintenant*, from *manu* + *tenente*, with the Eng. "off-hand," Germ. "aus der Hand." Lewis, op. cit. 210.

Sanskrit it is sometimes separated from the verb by tmesis. In Welsh it is usually separate, but sometimes united with the verb. Finally, in Irish, which in this, as in other instances, betrays its immense antiquity, the augment is not only regularly separated, but it takes various forms, as *at*, *ad*, *do*, *ro*, etc., which are all equivalent in meaning to the Welsh and Sanskrit *a*, Greek ε, and can be used for many other purposes besides that of adding definiteness to tense-forms.

It is owing to the fortunate circumstance that the Aryan languages have arrived at such different stages of integration, that we are so often able to discover the original significations of their now lifeless forms. That which in one language has become a mere suffix, is in a sister-dialect frequently preserved as an independent word. "An Englishman sees no distinct meaning in the final syllables of *man-hood*, *priest-hood*, *widow-hood*, or of the Germ. *frei-heit*, *schön-heit*, *weis-heit*. But a Bavarian, accustomed to talk of the 'gute' or 'schlechte *hait*' of things, can tell him at once that the termination in both languages denotes 'quality,' 'state,' 'condition.'" * So it is not at first sight obvious that *twenty* is compounded of *two* and *ten;* but when we refer to the Gothic *tvai tigjus*, the ancestral form of *twenty*, the principle of composition becomes at once manifest. The Lat. *viginti* and Skr. *vinsati*, which can readily be analyzed into *duo* + *decem* = *dvi* + *daçan*, afford further illustration; and the Chinese *eul-shi*, "twenty," which is simply made up of *eul*, "two," and *shi* "ten," completes the proof. The Semitic languages proceed upon a different, but very similar, principle. The Hebrew *sheloshim*, "thirty," *arbaghim*, "forty," etc., are the plurals of *sheloshah*, "three," *arbaghah*, "four"; while, since *shenayim*, "two," being already a dual, can be used no longer in such a formation,† "twenty" is expressed by *ghesrim*, the plural of *ghasarah*, "ten."

* Garnett, Philological Essays, p. 107.

† Gesenius, Heb. Gram. p. 180. "Numeri denarii exprimuntur plurali Numerorum simplicium sine ullo generis discrimine, ita tamen, ut Pluralis Numeri *ghesr* adhibeatur in Plurali ad denarium *viginti* designandum, cum hic Numerus a *terayim* formari non posset, et Numerus centenarius proprio jam gauderet nomine." Uhlemann, *Inst. Linguæ Samaritanæ*, p. 134. Cf. Ewald, Gramm. Arab. I. 231. Mr. Beames mentions languages which denote "twenty" by "four-five" (Indian Philology, p. 70), and compares therewith such French expressions as *quatre-vingt-dix-neuf*.

The analysis of *twenty* is easy, and has been sufficiently illustrated, so far as the Aryan formation is concerned, in Müller's Lectures. The structure of the English *eleven* and *twelve* more strikingly illustrates the integrating process. It is commonly supposed that these words form an exception to the ordinary Aryan rule in counting, since, while the Greek says ἕνδεκα, δώδεκα, and the Latin *undecim*, *duodecim*, the English does not say *oneteen* and *twoteen*, but substitutes anomalous forms. Webster, with his usual infelicity, explains *eleven* as "one-left (after ten)," and *twelve* as "two-left." * Sir G. C. Lewis contents himself with merely stating the apparent anomaly. He tells us (Rom. Lang., p. 164) that, while in the Romance languages *undici* and *dodici*, *once* and *doce*, *onze* and *douze*, are compounded of *one* and *two* with *ten*, on the other hand, in the Teutonic languages, *eleven* and *twelve*, *elf* and *zwölf*, are derivatives of *one* and *two*, and the word *ten* does not enter into them. Now a comparison of the cognate forms will show that this view is wholly incorrect, and that the word *ten*, though in a strangely altered shape, exists in *eleven* and *twelve* as much as in *undici* and *dodici*. In Anglo-Saxon these words appear as *endlufon* and *twelf;* in Gothic, as *ain-lif* and *twa-lif*, in which the first syllables are the Gothic words for *one* and *two*. What then is the final syllable *lif?* It is a modification of the word *liba*, meaning "ten," which appears also in Lithuanian as *lika;* the change from the labial to the guttural being just like the change from Lat. *lupus* to Gr. λύκος. In Lithuanian they say *dwylika* for "twelve," *trylika* for "thirteen," and so on, using throughout the same root which we use only in these two apparently exceptional cases. Finally, he who recollects how often an initial *d* interchanges with *l* in the mouths of those who speak carelessly, and who bears in mind the Latin *dingua* and *lingua*, *dagrima* and *lacruma*,† will find no difficulty in connecting the Lithuanian *lika* with *decem* and δέκα; a conclusion which is strikingly confirmed by the

* Compare Rabbi Jona's explanation of the equally puzzling עַשְׂתֵּי עָשָׂר as "close upon twelve."

† Compare also Fr. *guirlande*, Ital. *ghirlanda*, from Goth. *gairdan;* Span. *dejar* with the identical Fr. *laisser;* and the name Ὀδυσσεύς = *Ulysses*. It is said that *calamitas* was by Pompeius written *kadamitas*. (Key, 187.)

Pushtu *las*, "ten," compared with the Persian *dah*, Ossetic *das*, Armenian *dasn*. The Lat. *decem*, Skr. *daçan*, are notoriously identical with Goth. *taihun*, Germ. *zehn*, Eng. *ten;* so that *eleven* and *twelve* are not exceptions to our otherwise universal rule in naming numbers, save in so far as they are built up out of a somewhat unusual form of the word *ten*. It is interesting to notice that the Hindustani has similarly obliterated its roots in these two instances; making *igareh*, "eleven," and *bareh*, "twelve," from the Skr. *ekadaça* and *dvadaça*. And it is no less interesting to observe that even in barbarous dialects, which do not carry their simple numeration so far as ten, the compound numerals are constructed on the same general principle. Thus in Mikir, where the simple numerals run up to six, "seven" is *thorok* + *ichi* = "six-one," etc.; and in Kambojan, where they count up to five, "six" is *pram* + *moe* = "five-one."

The fact that *twelve* is merely an integrated form of *dvadaçan* is not more surprising than the fact that the *ch* in *which* and *such* was originally a verb meaning "to look." This verb appears in Sanskrit as *driç* (also *driksha*, δέρκ-ομαι, δράκων, δορκάς), and even in that language has already made itself useful as a termination denoting "resemblance," as in *kidriç*, "like what," *tadriç*, "like that." In other languages the initial *d* appears as *l;* and accordingly in Greek we find πη-λίκ-ος, "how great," τη-λίκ-ος, "so great"; Lat. *qua-li-s*, "like what," *ta-li-s*, "like that"; Goth. *hve-leik-s*, *sva-leik-s;* A. S. *hwy-lc*, *swy-lc;* Germ. *we-lch*, *so-lch;* Eng. *whi-ch*, *su-ch;* Scotch *quhi-lc*. The same verb appears in the endings of A. S. *leof-lic*, Eng. *love-ly*, and similar words.*

We are now prepared to enter upon a detailed examination of some forms of the Aryan verb, in which the general principles of linguistic structure are most strikingly exemplified. Those who make much of the distinction between analytic and synthetic languages might quote, in illustration of their position, the phrase, "he is loved," which the Latin renders in one word, *amatur*, and the German in three, *er wird geliebt*. We shall proceed to show that *amatur* is in reality an amalgamation

* Clark, Comparative Grammar, p. 178.

of four distinct words, and that, although employed in classic Latin as a true passive, it was originally a middle or reflexive, compounded upon the very same principle as the Germ. *liebt sich*. To this end it must first be shown that a reflexive can become a true passive; and here we shall be assisted by an interesting quotation from Mr. Marsh: —

"The Icelandic has a reflective form of the verb, used also as a passive, the characteristic of which is the consonantal ending *st* or *z:* thus the active infinitive *at kalla*, 'to call,' makes the reflective *kallast* or *kallaz*. This was anciently written *sc* or *sk* instead of *st*, and there is no doubt that it was originally simply a contraction of the reflective pronoun *sik*, corresponding to our *self*, or more exactly to the French reflective *se*, so that *at kallast* was equivalent to 'to call one's self,' or the Fr. *s'appeler*. The form in question was at first purely reflective. It gradually assumed a passive force, and there are a few instances of its employment as such by classic writers in the best ages of that literature. In modern Danish and Swedish it is a true passive." — *English Language*, Vol. I. p. 337.

In the Sclavonic languages the process may be traced in various stages of completeness. In Old Bulgarian we have *chtu*, "lego," + *sya*, the reflexive, making *chtusya*, "legor." In Bohemian the reflexive *se* is written separately from the verb, and may stand either before or after it. The Lithuanian affords a transitional variety, exhibiting the reflexive united and partially integrated with the verb, but not so much altered as in the less primitive forms of Greek, Latin, and Sanskrit. Thus, from *wadina* is made the reflexive-passive *wadinas*, "he is named." The same principle is at work in the Provençal "czo que *se conten* en aquesta leiczon," or "that which is contained in that lesson," and in the Wallachian *io me laudu*, "I am praised." * And finally the reflexive prefix *hin* in the Hebrew "Niphal" and the Arabic seventh conjugation serves to form a passive. We must therefore conclude that the Latin *amatur* was formerly *amatu-se*, like the kindred Bohemian *amat-se*.

* Certain analogous idiomatic forms still exist in Italian: "Questa plaza *si chiama* 'Plaza di Firenze,'" "This square (place) is called 'Florence Square (Place)'"; in French: "L'huile minérale *se trouve* en abondance en Pennsylvanie," "Mineral oil is found in abundance in Pennsylvania"; and even sporadically in German: "Wasserstoffhyperoxyd *zersetzt sich* an der Luft," "Deutoxide of hydrogen is decomposed in the air." "Der Stahl *färbt sich* in der Hitze," "Steel is colored by heat." Spanish and Portuguese show traces of similar constructions.

The change of *s* into *r*, as in *labos* = *labor*, *honos* = *honor*, is almost too well known to require mention.*

So much for the final letter of *amatur*. The *tu* preceding it is nothing more nor less than the third personal pronoun *ta*, of which relics are seen in Germ. *lieb-t*, and in the *th* or *s* in Eng. *loveth*, *loves*. So that we have the formula *ama* + *tu* + *r* = *lieb* + *t* + *sich* = *love* + *s* + *self*. And similarly it might be proved that the Gr. φιλεῖται was formerly φιλείτασι, and that the Skr. *kamayate* was once *kamayatasi*.

It is thus proved that there are at least three distinct words integrated in *ama-tu-r*. Further inquiry will show that there is a fourth, namely, the final vowel *a* of the stem *am-a*, which the old grammarians thought they had sufficiently explained when they had christened it "the connecting vowel." That it was originally something more than a mere connecting vowel will appear from the Sanskrit form in the following table: —

φιλ-εῖ-ται	am-ā-tu-r	kam-aya-te
φιλ-εέ-τα-σι	am-ăă-ta-se	kam-aya-ta-si
φιλ-*aya*-τα-σι	am-aya-ta-se	kam-aya-ta-si

This word *aya* appears in Zend as *aye*. In Lithuanian it is best preserved in the third conjugation as *eyo;* while in the second conjugation it has become *a*. In Latin it is variously contracted, in verbs of the first, second, and fourth conjugations, into *a*, *e*, and *i*. In Prakrit it has become *e*. The universality of its presence shows that it fulfils an important function; but its primitive signification cannot be detected at a glance. Mr. Clark (Comp. Gram., p. 232) discusses and rejects the only hypothesis which seems to occur to him, namely, that it is a tense-sign. The mere fact that it occurs in all the tenses alike is fatal to such a supposition. We shall find that the true explanation is more difficult and will take us far down into the primitive formation of language.

Sir Graves Haughton (Bengali Gram., pp. 68, 95) has satisfactorily explained the similarly inserted *ya* of Sanskrit passives as being simply the auxiliary verb *ya*, "to go." Both in Bengali and in Hindustani the passive is regularly formed by such

* This interpretation of the *r* in *amatur* rests chiefly upon the authority of Bopp (*Vergl. Gramm.* II. 688), and Pott (*Etym. Forsch.* I. 133). It is vigorously but ineffectively combated by Donaldson, who of course does not let slip the opportunity of reviling Professor Key for giving his adherence to it. (New Cratylus, p. 587, fol'g.)

an auxiliary, e. g. *kara yai*, "I go to making" = "I am made," with which we may compare the Lat. "amatum iri." Now many facts combine to show that *aya* is also an auxiliary, being a very old root with the signification "do," "make," or "cause." In Sanskrit, Latin, Greek, and Gothic, it is used in the formation of causatives and denominatives: thus, in Skr. *kar-aya-mi*, "I cause to make"; in Lat. *nec-a-re*, "cause to die," *mon-e-re*, "cause to think," *sop-i-re*, "cause to sleep"; in Gr. *καλ-έ-ω*, "cause to hear" (*κλύ-ω*); in Goth. *drank-ja*, "cause to drink," i. e. "drench." Even "in the English word *drench*, although no part of the original *aya* is preserved, yet the influence of *y* is apparent in the change of *k* to *ch*" (Clark, Comp. Gram., 271). In Welsh and Irish, *aya*, represented by *ia* and *aigh*, forms causatives and denominatives;* as in Irish *beos-aigh-im*, identical with Skr. *bhush-aya-mi*, "I adorn"; and it appears in the Irish adjectival termination *ach*, as in *beos-ach*, "beautiful." This last circumstance leads us to regard the *ya* employed in the formation of denominative abstracts (*σοφ-ία*, *præsent-ia*), and adjectives (*div-ya-s*, "heavenly," from *div*, *οὐράν-ιο-ς* from *οὐρανός*, *patr-iu-s* from *pater*, *Mart-iu-s* from *Mars*), as also a form of *aya*. Finally, this ubiquitous word appears in Sanskrit as a dative-ending, and is used in some feminine nouns to form the instrumental case, as in *jihvaya*, "with the tongue," from *jihva*. †

The inference from all this is that *aya* had a generally causative signification, and was therefore early adopted in the mother-Aryan as a means by which to distinguish verbs from nouns. Its use in the formation of denominatives alone tells the story; for a denominative is simply a verb formed from a noun, and we have now to observe that all verbs are formed from nouns or other parts of speech, sometimes merely by affixing pronouns, sometimes by the additional insertion of a verb-making word like this *aya*. The reader must rid himself of the notion, derived from a familiarity with highly developed languages, that between the verb and other parts of speech

* Pictet, *Langues Celtiques*, pp. 148, 149.

† It appears also in the Greek infinitive-ending *μεναι*, for Skr. *.manaya*, dat. sing. of *mana;* and in the Old Saxon and Anglo-Saxon infinitive-ending *e* for *ai*. See Clark, Comp. Gram., 299, and cf. Donaldson, New Crat., p. 664.

there is fixed a deep and impassable gulf. Most languages recognize no such wide and permanent distinction. In Chinese a noun becomes a verb merely by change of tone. In Mandshu the same roots may generally be used as nouns, verbs, adverbs, or even as particles. In Hungarian, *lak* means "dwelling-place"; followed by a pronoun, it becomes a verb, *lak-ih*, "he dwells." In the same language *lep-em* may mean either "my covering" or "I cover." In the whole Tungusic class there is no formal distinction between "my pay" and "I pay." In Turkish, *güzel-im* may mean "my handsome one," or "I am handsome," according as it is accented.* "There is no way of distinguishing between a Coptic finite verb and the corresponding noun with pronominal affixes, except that the latter usually has the article, which is wanting in the former." (Garnett, p. 293.) In Tamil, verbal forms may be declined and nouns may be conjugated. In Malagassy they conjugate even adverbs and prepositions. In Basque and several American languages, even conjunctions "may be conjugated through a long array of moods and tenses."

Nevertheless, it is convenient to have a distinction in form between nouns and verbs; and accordingly, in the mother-Aryan, we find that three expedients were adopted to secure this desideratum. In the first place, the verb was distinguished from the noun by a different set of pronominal endings. Thus, in Sanskrit, *vak*, when followed by case-endings, as *vak-as*, *vak-i*, etc., means "speech"; but when followed by a different set of affixes, as *vak-mi*, *vak-shi*, *vak-ti*, it means "I speak," etc. In the second place, a noun became a verb by being reduplicated,† as *dha-dha-ma*, "I do," Skr. *dadhami*, Gr. τίθημι. The third expedient, which was resorted to at a later period, was the insertion of certain auxiliary forms, called by the Indian grammarians "vikaranas," of which our *aya* is a specimen. Thus the Latin, from the root *voc*, makes *voc-s*, "voice," and

* Compare the English *pérfect* and *perféct*, *súrvey* and *survéy*, *ábsent* and *absént*, and the still slighter distinction between *ádvocăte* and *ádvocāte*.

† After the introduction of new bases, formed by a "vikarana," the old reduplicated forms were usually made to serve for the perfect tense. Curiously enough, in Thibetan we find verbs made by reduplication of the final letter, as *nag*, "black," *nag-go*, "it is black." Max Müller suggests that the variable consonant in Semitic triliteral roots may have arisen from a similar device. Bunsen, Outlines, I. 306 08.

it might have made the corresponding verb by simply affixing the requisite pronoun, in which case *voc-t* would have been quite identical with Skr. *vak-ti*. Instead of so doing, however, it first added the auxiliary *aya*, making *voc-a-t*, "he speaks."

That such was the proper function of *aya* may be clearly seen from its use in imperatives. As Garnett well observes, a noun may be an imperative, as when the chairman of a turbulent meeting cries out, *Silence!* Even particles, as Germ. *fort!* Ital. *via!* may be similarly used. When the old Aryan languages used their nouns in this sense, they generally affixed to them the "vikarana," or verb-maker. The second person-ending of the Sanskrit imperatives in verbs of the tenth class is simply *aya*, which still exists in the Gr. *τίμ-α*, *φίλ-ει*, Lat. *am-a*, *hab-e*, Goth. *tam-ei*, *hab-ai*.

But we have seen this useful verb-maker serving also as a dative-sign for nouns. How are we to reconcile such widely divergent functions? The task will not seem difficult when we recollect that in English, where the loss of inflectional forms frequently makes us return to primitive methods, we are continually raising nouns into verbs by simply prefixing that preposition which we use also as the sign of the dative case. "Love" is a noun, but "to love" is a verb; "to me" is a dative, but "to dwell" is an infinitive. We are strongly inclined to refer this preposition *to*, Germ. *zu*, Lat. *ad*, Skr. *adhi*, to the venerable root *dha*, Skr. *dha*, Gr. *θη*, Lat. *da*, Germ. *thu*, Eng. *do*.* At all events, the kinship between the idea of "doing" and that of "motion towards" is sufficiently obvious to any one familiar with the tricks of language, and is undoubtedly illustrated in the close similarity of the Aryan roots *aya*, "do," and *ya*, "go." The English *to* was originally used, in Gothic, to denote the goal at which an action aims, as *du hausjan*, "in order to hear." †

From all these considerations, we regard it as sufficiently proved that *aya* is a most ancient word, signifying "do," "put," or "cause," — analogous, in short, to *dha*. Early losing its independent power, it became a useful auxiliary with

* Compare Tooke, Diversions of Purley (ed. Taylor), p. 189, fol'g. And see, for the possibility of a connection between *θη* and *ya*, Curtius, *Beiträge*, p. 329.

† Note also the inceptive force of Greek verbs in *ιάω*, as *ἰλιγγιάω*, "I grow dizzy," *κελαινιάω*, "I grow black," *ὠχριάω*, "I grow pale," etc. Farrar, Greek Syntax, p. 46.

which to form dative (and sometimes instrumental) cases, infinitives, and causative, as well as denominative, verbs. Thus is every syllable of our test-word *am-a-tu-r* adequately explained; and we find it to have consisted originally of four independent words, *am* + *aya* + *ta* + *se* = "love-does-he-himself." *

This example, as well as those previously cited, shows most strikingly the way in which the Aryan languages are built up; and any further inquiry can only serve to illustrate our fundamental proposition that the history of Aryan speech is in the main a history of phonetic integration. The less highly developed Semitic languages can afford us no such striking examples; yet from this more primitive domain we shall select one instance which will show us that it is governed by the same general laws. The earliest device for forming plurals appears to have been the addition of a word signifying "multitude," "crowd," "heap," or "all." In Tamil the plural suffix is *gal*, which Caldwell derives from *dala*, "a crowd": the Telugu suffix *lu* has the same meaning. The Hindustani, which has lost the Sanskrit sign for plurality, has recourse to *lab*, "people," or *sab*, "all." Bearing this in mind, let us take a Hebrew word, such as *dhôv*, "good," and observe how it forms the plural. The masculine *dhov*, "bonus," takes the ending *ghim*, forming by integration the plural *dhov-im*. Now this word *ghim* denotes an aggregate, and is independently used as an adverb and preposition † equivalent in force to ἅμα, ὁμοῦ, Lat. *cum*, *simul*, Skr. *sam*, Irish *samhuil;* though, whether, as Gesenius and Donaldson think, it is etymologically akin to these words, we shall not attempt to decide.‡ So that *dhov-im* is nothing more nor less than "good-flock." On the other hand, the feminine *dhovah*, "bona," takes a different suffix, *h'eth*, with which, by integration, it forms the plural *dhovah* + *h'eth* = *dhovoth*. This

* In the Suabian, Bavarian, and Tyrolese dialects, the verb "do" is (as in English emphatic forms) used universally as an auxiliary with infinitives, to express the various sub-forms of the indicative mood, — only the auxiliary undergoing conjugation. See also the M. H. G. To avoid unnecessary prolixity, I have abstained from any reference to the oblique case in which the pronoun is joined to the verb. The views here set forth are not to be interpreted as conflicting with those expounded by Garnett in his famous paper on "The Nature and Analysis of the Verb," 1849.

† Compare the kinship between Fr. *troupeau* and *trop;* Ital. *truppa* and *troppo*. Lewis, Rom. Lang. 223.

‡ Gesenius, Heb. Gr. p. 4; Donaldson, *Maskil le-Sopher*, p. 15.

word *h'eth* expresses addition, and is used adverbially like ἔτι, Lat. *et*, *ad*, Skr. *ati;* so that *dhovoth* is a "good (she) heap." Thus it appears that Semitic no less than Aryan forms show us, when duly analyzed, that in the organic structure of language no part is now dead which was not originally alive.

So far we have been dealing either with languages, like Chinese, in which all the elements of speech are severally significant, or with languages, like the Aryan and Semitic, in which integration has proceeded so far as to blend roots and terminations almost indistinguishably together. In words like *which* and *twelve*, did we not possess the parallel forms in cognate dialects, we could hardly perceive any vestige of an originally composite structure. In the Lat. *sum*, the constituent roots are completely fused together, and although in the third person *est* the union of the roots *es* and *ta* is sufficiently conspicuous, it is nevertheless impossible to use one without the other. Taken alone, *es* is merely so much empty sound.* We call the *t* a termination, but strictly speaking it is itself a root, and its terminational position is merely accidental. The Greek and Sanskrit augments, which belong with the so-called terminations, are placed at the beginning. If we call *es* the constant root, because it appears in a more or less mutilated form throughout the paradigm, we may call *t*, *umus*, *tis*, etc., the variable roots, since each continually gives place to another. And we may formulate it, as the grand principle of structure in the Semitic and Aryan languages, that neither their constant nor their variable roots can be used by themselves. Glancing now at a totally different class of languages, we are confronted by a new state of things. In Turkish, from the root *sever*, "to love," we have the paradigm: —

sever-im,	I love,	sever-iz, we	love.
sever-sen,	thou lovest,	sever-siz, you	
sever,	he loves;	sever-ler, they	

Here in the third person singular the root *sever* is used by itself in the sense of "he loves," as in the Hebrew *qatal*, "he kills," and in various Tatar verbs.† The endings, or variable

* Except, of course, in the second person singular, where the ancient termination has been entirely lost.

† See Wiedemann, Tcheremissian Grammar, p. 122. But in many languages of this type the third person singular also has its distinguishing mark, as in the Telugu *vaguta-du*, "he speaks."

roots, by which the other persons are distinguished, are more or less abraded forms of *ben*, *sen*, *biz*, *siz*, and *onlar*. Here, therefore, we perceive that the variable roots have lost their independent shape and meaning almost as much as in the Latin verb. Not so, however, with the constant root. Not an atom of that can be altered. Through all possible moods and tenses, and in all possible compounds, it must remain intact in every letter; and were all the variable roots taken away, it would still accurately convey the idea of loving.

Starting from these data, Wilhelm von Humboldt has shown * that all possible languages may be grouped, according to their morphological structure, in three classes: —

I. Languages, like Chinese, in which two roots are merely juxtaposed, each retaining its independent form and power; as in *eul-shi* = "two-ten." These languages have been variously called Isolating, Radical, or Monosyllabic; but the term Juxtapositive is far more accurate.

II. Languages, like Turkish, in which two roots are joined together, one only retaining its independent form and power; as in *sever-im*, from *sever* + *ben*. These languages have been variously called Terminational, Allophylian, Scythian, Turanian, or Agglutinative; of which the last is the only accurate designation.

III. Languages, like the Aryan and Semitic, in which two roots are united, neither the one nor the other retaining its independent form or power; as in *vinçati* and *twenty*. These languages have been called Inflectional or Amalgamative; of which the latter is the more clearly distinctive epithet.

For this classification of languages Schleicher has proposed a notation at once philosophical and convenient.† Denoting

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* In the paper on The Evolution of Language, above cited, this grand discovery was attributed to Max Müller. It was, however, distinctly announced by Humboldt, in his essay *Ueber die Entstehung der grammatischen Formen*, published in 1822; although Müller has considerably enriched and brilliantly illustrated it. In Mr. Hunter's Annals of Rural Bengal, I. 161, it is strangely alluded to as Schleicher's system of classification. I am not aware that Schleicher has done anything for it, except to furnish an excellent method of notation. Max Müller's parallel nomenclature of Family, Nomad, and State languages is to be accepted only with ample reservations.

† Schleicher, *Zur Morphologie der Sprache*, St. Petersburg, 1859.

throughout a constant root by R, a variable root by r, and expressing by an exponential x the fact that the root to which this exponent is appended has lost or is liable to lose its independent life, the general formulas for the three classes are: for the Juxtapositive RR; for the Agglutinative Rr^x, r^xR, or r^xRr^x; for the Amalgamative R^xr^x, r^xR^x, $r^xR^xr^x$, or r^xr^x. Thus the Chinese *eul-shi* may be represented by RR; the Turkish *sever-im* by Rr^xr^x; the English *twelve* by rr^x; the Latin *am-a-tu-r* by $Rr^xr^xr^x$; the Greek εἰμί by R^xr^x; the Arabic *ya-qbul-una*, from *qabal*, "to live," by $r^xR^xr^x$. By this notation the extent to which any language has become integrated may be succinctly represented; and we are graphically reminded of the fact, too often forgotten, that a prefix is morphologically the same as a suffix, and that both alike are roots.

Humboldt's classification of languages was the second great achievement of inductive philology. It has done for the science of Language what Cuvier's classification of animals did for the science of Life; and, even more than Cuvier's, it possesses the signal feature that the progress of discovery may enrich and verify, but can never invalidate or essentially alter it. For it should be distinctly understood that Humboldt's classification covers all the fundamental possibilities of linguistic structure. With roots as our raw material, we can build up language after three, and only three, architectural patterns. We can make words like *eul-shi*, words like *sever-im*, and words like *twenty*; but when we have done this we have exhausted our stock of permutations, and can go no farther. No matter how many roots we pile together, the general principle remains the same. When the Chinaman clumsily designates "virtue" as *tsun-hyan-tsye-i*, "fidelity-reverence-temperance-uprightness," he still keeps all his roots distinct, and feels their separate force. So in Turkish the constant root must be kept intact, however numerous the elemental roots which are heaped together to form it. The constant root *sever* is itself composed of two roots, *sev* and *er*. Instead of this *er*, we might put on half a dozen roots, as *ish* = "self," *dir* = "cause," *il*, the passive-sign, *eh* = "able," *me* = "not," *mek*, the participial-sign; and should thus obtain the following perfectly admissible paradigm: —

sev-ish-dir-il-eh-me-mek-*iz*, "we cannot be made to love each other";
sev-ish-dir-il-eh-me-mek-*siz*, "you cannot be made to love each other";
sev-ish-dir-il-eh-me-mek-*ler*, "they cannot be made to love each other."

Here the constant root *sevishdirilehmemek*, in spite of its composite character and its troublesome length, retains throughout its integrity both of sound and meaning. The essential distinction between this compound and an equally long Chinese phrase is that here the various auxiliary roots cannot be used alone.* The formula for the Chinese compound just cited is *RRRR;* but for the Turkish compound it would be $Rr^1r^2r^3r^4r^5r^6r^x$. Coming now to languages of the third class, we find that here also the number of roots does not affect the mode of union. The word *stranger* consists of at least four roots, all of which are visible, though not in their primitive shape, in Lat. *ex-tran-eu-s;* but which in the English word are indistinguishably fused together. The formula for *stranger* would be $r^xr^xr^xr^xr^x$. A more convenient method of notation is to express the elements of a constant root by R, accompanied by a parenthesis containing the letters a, b, c, and so on. Thus denoted, our Chinese word remains *RRRR;* our Turkish word is symbolized by $R(abcdefg)r^x$; our English word by $R(abcd)^x$.

Humboldt's system, therefore, accounting as it does for all possible combinations, must forever remain the basis of linguistic classification. As often as adventurous colonists, geographers, and missionaries bring home new dialects from the hidden regions of Central Africa, from the backwoods of Australia, or from the deep valleys of the Himalaya, we have only to ascertain the degree of coherence between their roots in order to assign them at once a place in one of Humboldt's three groups.† When there is no coherence, they must be classed with Chinese. When there is incomplete coherence, shown in the non-absorption of the constant root, they must be classed with Turkish. When there is complete coherence, exhibited in the absorption of both constant and variable roots, they must be classed with Sanskrit. There is no fourth alternative. Further research can busy itself only in the work of establishing sub-classes.

* Beames, Indian Philology, p. 27.

† It is in this way that Mr. Hunter has brilliantly interpreted the structure of the Santal language. See his Rural Bengal, I. 156–180.

The third great step in scientific philology was taken by Bunsen and Max Müller, and consisted in showing that to whatever class a language now belongs, it must originally have belonged to the first, or juxtapositive, class. If all our case-endings, person-endings, signs of gender, tense, and number, are the fossil relics of once significant words, — if *twenty* was once *two-ten*, and *vinçati* was once *dvi-daçan*, and *amatur* was once *am-aya-ta-se*, — the conclusion is inevitable that English and Sanskrit and Latin must at first have had the same structure as Chinese. Whatever may be the case to-day, there has been a period in the career of mankind when the formula for all existing languages was simply *RRRR ad infinitum*. This inference cannot be gainsaid without overthrowing all that inductive philology has accomplished, and returning to the lawless and barren guesswork of Ménage and Guichard. He who would prove that the amalgamative languages were always amalgamative, must first prove that *twenty* never was *two-ten*, though the Gothic *tvai tigjus* stares him in the face; that the *d* in *loved* was never an active verb, though a host of transitional forms, ending with the Sanskrit *dadhami*, assure him that it was; he must prove, in short, that the defunct elements which make up an inflected word were never endowed with vitality. As Garnett says, he must show that while barbarous Finns and Tatars express logical and grammatical relations by significant affixes, the most cultivated races in the world employ mere jargon for the same purpose. It would be nearly as easy to impugn the law of gravitation. As surely as the existence of fossil iguanodons points back to a time when the earth swarmed with live iguanodons, so surely do fossil words, like the *d* in *loved* and the *ch* in *which*, point back to a time when all the elements of speech were alive with significance. The Humboldt-Müller classification is therefore far more than an ordinary classification. It is a formula of linguistic development. The languages ranked as juxtapositive (RR) are simply those which have retained their primitive structure, while all others have lost it. Agglutinative languages (Rr^x) have reached an intermediate stage; while amalgamative languages, like our own (R^xr^x), have assumed the final type of organization. For the languages respectively comprised under

Humboldt's three great classes, I would therefore propose the new designations, Primary, Secondary, and Tertiary;* a nomenclature which is more simple, definite, and suggestive than the one now current, while it is at the same time equally accurate. Throughout the present discussion these terms will be used to describe not only the languages characterized by certain verbal formations, but also the formations themselves. Thus, *New Town* and νέος πόλις are primary structures, *RR; Newton* and *Neapolis* are secondary, Rr^x and r^xR; *Naples* is tertiary, r^xr^x. The advantages of this will presently be seen.

This view of the process of linguistic development has been adopted, more or less unreservedly, by nearly all the most eminent philologists, — by Bopp, Ewald, Lassen, Lepsius, Benfey, Boehtlingk,† Burnouf, Bunsen, Garnett, Steinthal, Schleicher,‡ and Whitney; § and — greatest name of all — by the chief of modern scholars, Jacob Grimm.‖ Nevertheless, M. Renan rejects this doctrine, and maintains that highly developed languages, like the mother-Aryan, sprang at once from the human mind, like Pallas from the brain of Zeus, with all their inflections and delicate contrivances completely organized from the very beginning. And his opinion is reiterated by Mr. Farrar, who, in his otherwise excellent popular essay on the

* This is left as it was written in January, 1867, when most of the present essay, including the entire argument, was in MS. Since then, Müller has used a similar terminology in his Stratification of Language, p. 32. The same nomenclature is used by Donaldson in his New Cratylus, pp. 85, 87, and *Maskil le-Sopher*, p. 3, to express a totally different system of classification, and is in the New Cratylus connected with a theory of the Chinese and Turanian languages, which is now too absurd to need refutation. Renan employs the term *secondary* to describe derivative languages, like French and Italian; but in this sense it might equally be applied to all languages, since probably not one of those which now exist is truly primordial. French is not more demonstrably derived from Latin than Latin is derived from the mother-Aryan.

† "It is inconceivable how, with such a view on the origin of inflections, any one can doubt for a moment about the possibility of two such languages as Chinese and Sanskrit having the same origin." Boehtlingk, in Bunsen's Outlines, I. 283.

‡ "Der Bau aller Sprachen weist darauf hin, dass seine älteste Form im wesentlichen dieselbe war, die sich bei einigen Sprachen einfachsten Baues (z. B. beim Chinesischen) erhalten hat." Schleicher, *Die Darwinsche Theorie*, p. 22.

§ See Whitney's Study of Language, pp. 253, 401, where the opposers of this doctrine are compared to the anti-geologists of the last century, who believed that fossil plants and animals were created already dead and petrified.

‖ Grimm, *Ursprung der Sprache*, pp. 37 – 47.

"Origin of Language," remarks of Max Müller's law of development, that "at best it can only be regarded as an artificial hypothesis, occasionally convenient for the purposes of the grammarian, but not corresponding to any real condition of the languages as once spoken" (p. 184). What he means to say, is, that *amatur*, for instance, was never really spoken by ancestral Aryan mouths as *am aya ta se;* for in another place he asserts that roots were never real words, but are "mere etymologic fictions." * The philologist, or even the general student who has once mastered his Bopp and his Garnett, will need no lengthy argument to convince him of the utter shallowness and futility of such assertions. Nevertheless, M. Renan's great and deserved reputation makes it desirable that we should give yet further consideration to the objections which have been urged against the doctrine here maintained.†

One of M. Renan's chief difficulties seems to lie in the great distance which separates the three types of linguistic structure, and in the supposed absence or fewness of transitional dialects connecting one class with another. That the difficulty is only imaginary will appear, in the first place, from a consideration of the Romanic dialects. A language, like Latin, spread over a vast space of country in imperfectly civilized times, inevitably breaks up into a host of local *patois*. Each secluded rustic community has its own style of pronunciation, its own choice of words and syntactical devices, its own method of contracting or otherwise modifying its expressions. And although the inhabitants of any given town can usually communicate with those of the next town, the slight differences

* Farrar, Chapters on Language, p. 58.

† In justice to Renan, it should be observed that Müller has obscured and weakened his own case by his premature, if not wholly unwarrantable, extension of the name *Turanian;* which gives to his argument something of the air of an attempt to derive all varieties of speech from one primordial language. With Bunsen, indeed, this seems to have been the chief object in view. We have already registered our emphatic conviction of the futility of all such attempts; and though, in the paper above cited, we defended Müller's use of the name *Turanian*, we never attached to it any other than a morphological sense. But it is properly a genetic epithet, strictly applicable only to the Tungusic, Mongolic, Turkic, Ugric, and possibly to the Samoyedic languages; to designate which, it would seem preferable to Professor Whitney's term *Scythian*. Most Scythian words preserved by ancient authors are said to correspond with Aryan (i. e. Sclavonic, Gothic, or Medo-Persian) words. See Garnett, p. 248.

accumulate until intercourse between distant places is no longer practicable. In such a state of things we find plenty of transitional dialects, as the Genoese and Provençal between Italian and French, and the Balearic and Catalan between French and Spanish. The Tuscan can understand the Genoese, the Genoese can understand the dweller in Piedmont, the Piedmontese can understand the Vaudois, and so on through Provençal, Limousin, and Lyonnais, until we come to Paris; but the Tuscan and the Parisian cannot understand each other. Now the progress of civilization in each country tends to kill out the *patois*, elevating that variety of the language which has been made the vehicle of the dominant literature to supremacy over the more provincial forms. Increased facilities of communication, and the growth of large centres of population, and commercial as well as literary activity, end by making the inhabitants of all parts of the country speak and write more and more like those of its intellectual metropolis. And in this way the intermediate dialects slowly disappear, leaving two languages with thoroughly distinct individualities, like Italian and French. This may be graphically illustrated as follows: —

Since Latin became the vernacular language of Italy, Spain, and France, these countries have never been wholly sunk in barbarism; and the connection between them, as well as the social stability preserved in each of them, has sufficed to prevent their dialects from diverging so widely as to lose the traces of their common origin. In Hindustan the case is somewhat different. "Except where natural barriers, as mountains or seas, occur, we nowhere find one language leaving off and another beginning at a given spot. Thus the Hindi of Purneah, as you go eastwards, gets more and more tinged with Bengali, till at last you reach a point where there is no Hindi at all traceable in it; but it is impossible to point out the exact spot where you cease to hear Hindi or begin to hear Bengali." * But this state of things is rapidly passing away. The cultivated Hindustani of Delhi is prevailing over the local *patois* so rapidly, that Mr. Beames urges his brother philologists to make all haste in securing the aid to be derived from them. For so great has been the ethnic admixture in Hindustan, that the extreme forms of the Sanskrit-descended dialects are by no means so clearly related to each other as the French and Italian. Some of them, as the Bengali, have diverged to such an extent that their Aryan character has been doubted.

It should also be borne in mind that languages change most rapidly during periods of ethnic disturbance, when the fleeting forms are less likely to be preserved by literary means. And finally, a rising language, being at first despised as a corrupt jargon, does not become recognized and embodied in literature until it has already undergone a great alteration. Latin continued to be the only acknowledged literary language in Western Europe long after French, Spanish, and Italian had assumed distinct individualities. And so powerful has been the effect of this circumstance in breaking the continuity of linguistic tradition, that even here, where the change has taken place almost under our eyes, so excellent a scholar as Raynouard has been led to propound the paradox that the modern Romanic tongues are derived, not directly from the Latin, but from the old Provençal; and it is only by a most delicate philological analysis that he has been refuted.

* Beames, Indian Philology, p. 14.

Now if all this is true of languages springing from a classical, cultivated, thoroughly individualized mother-tongue, like the Latin or Sanskrit, during periods of comparative social stability, what, I ask, must be the case with the divergent offspring of dialects which have never been made the vehicle of literature, which have never been organized into a single well-defined language, and which have been spoken by nomadic tribes almost destitute of a continuous linguistic tradition? If Italian could be, even for a moment, supposed to be a daughter of Provençal, if Bengali could be mistaken for a non-Aryan language, how can we be expected to trace the intermediate processes by which Syrianian or Yakut has arisen from juxtaposition to agglutination? Our real ground for wonder is, not that transitional forms are missing, but that we find so many as we do.*

For it is in the highest degree erroneous to suppose that the three types of linguistic structure are separated from each other by distinctly traceable dividing lines. A brief examination will show not only that, in spite of all adverse influences, there are several transitional dialects in existence, but also that all human speech is filled with transitional formations.† To begin with Chinese, the literary dialect of to-day — although for a good reason, soon to be explained, it has never undergone agglutination — is by no means unchanged from the literary dialect of twelve centuries ago. So many words have become emptied of their primitive force that "no native would now understand one sentence of the old Chinese, if he merely heard it read as it stands, without the help of repetitions, expletives, pauses, and finally of gestures." (Bunsen, Outlines, II. 68.) In the Man-

* The remarkable parallelism between the zoölogical and linguistic arguments will be here observed by every naturalist.

† "It is strange that those scholars who hold that no transition is possible from one form of language to another should not have seen that there is really no language that can be strictly called either isolating, or agglutinative, or inflectional, and that the transition from one stage to another is constantly taking place under our very eyes." Müller, Stratification of Language, p. 18. M. Chavée has gone to the ridiculous length of supposing that two different types of lingual organization necessarily indicate two different primitive types of cerebral structure in the corresponding peoples. (*Les Langues et les Races*, Paris, 1862.) But here, as often elsewhere, what can we do but ask, with the urbane Roman critic, "Cui non post Varronem sit venia?" (Quintilian, I. 6, 37.)

darin and in the provincial dialects most exposed to foreign influences, there is exhibited a strong tendency toward the assumption of the secondary type.

In old Chinese "the identity of verbal and nominal bases is absolute"; but in modern Shanghai "a noun is not transformed into a verb without its proper change of form by suffix." Müller has already shown that the Shanghai is now rapidly developing a case-system. Here as elsewhere we find that modifying words are liable in daily use to coalesce with the words which they modify, and in so doing to become mere prefixes or terminations. And it is obvious that this tendency, if allowed for some time to operate unchecked by the conservatism of polite usage, would end by transforming the Chinese into a secondary language. It is in this way that certain Mongolic and Tungusic dialects in Eastern Siberia have quite recently developed a system of person-endings for their verbs.*

Agglutination, the distinctive feature of all secondary languages, is by no means equally prominent in all. While the Tungusic idioms, as well as the Gangetic and Lohitic, are little superior to the Chinese in structure, the Turkic and Finnic groups show rudimentary symptoms of amalgamation. It is significant that the Northern or Turanian languages of Asia present us with a complete series of structural gradations, from the almost primary Mandshu, through the Mongolic and Turco-Tataric, to the almost tertiary Finnish and Esthonian; while in the South we find that Siamese, Burmese, Kassia, Khamti, etc., can be arranged in a similar series, culminating in the languages of the Dravidian family, which hover just on the border line between the secondary and tertiary kingdoms. While, on the one hand, it is hard to tell whether Burmese and Thibetan are primary or secondary,† on the other hand we find in Turkish

* Castrén, *De Affixis Personalibus*, p. 13. Compare Müller's Lectures, I. 64, 300, 323; Rémusat, *Fundgruben des Orients*, III. 279; Bazin's *Grammaire Mandarine;* and his *Principes Généraux du Chinois Vulgaire*, in the *Journal Asiatique*, 1845.

† See Whitney, pp. 320, 336, 337, 359. This circumstance, as might be expected, troubles M. Renan, who admits that it is "en apparence contraire à tous les principes." (*L'Origine du Langage*, 213.) His attempt to explain it away is by no means happy; covering as it does two pages characterized by an obscurity quite unusual with him, where tawdry phrases like "fusibilité primitive," "soudures profondes," and "état embryonnaire," serve but inefficiently to conceal the emptiness of the thought. He is here, as usual, followed by Mr. Farrar. (Origin of Language, 213, 214.)

such tertiary formations as *göz*, "eye," and *gör*, "to see"; *ish*, "deed," and *ir*, "to do"; *îtsh*, "interior," and *gir*, "to enter." * In these words the root is no more preserved intact than it is in Skr. *devas*, from *div*, "to shine"; and if the Turkish continues to mutilate its roots in this manner, it will eventually have to be classed as a tertiary language, though it will no doubt remain as unlike the Aryan and Semitic families as these are unlike each other. So when the Greenlandic, a secondary language, makes the verb *tikipunga*, "I have arrived," out of the root *tikit*, it is amalgamating no less than the Spanish amalgamates when out of the root *ven*, "to come," it makes *viene* and *viniera*. The Finnish *käsi*, "hand," *kädet*, "hands," exhibits "a plural more decidedly inflectional than the Greek χεῖρ-ες or the English *hand-s*." (Müller, Stratification, p. 19.) In Tamil the junction of *kal*, "stone," with *gal* (from *dala*, "a crowd") results in the tertiary plural *karkal*. In Finnish we have *ukko*, "old man," but *akka*, "old woman," showing perhaps the germ of a Semitic type of formation. Even down in Mandshu we find *morin*, "horse," but *morisa*, "horses." Finally, when we examine the pronouns, — those little words which by constant friction are soonest altered, and which have been happily compared by Schlegel to small pieces of money which get their imprints rubbed off, while the larger gold pieces retain their freshness, — we shall hardly find such a thing as a truly primary pronoun. The Hungarian and Syrianian *me*, *mi*, *te*, *ti*, the Mordwinian *mon*, *min*, *ton*, *tin*, *son*, *sin*, the Canarese *nan* and *navu*, *nin* and *nivu*, *tan* and *tavu*, even the Kassia *nga*, *ngi*, *pha*, *phi*, are as decidedly tertiary as the Skr. *yas*, *ye*, or the Gr. ὅς, οἵ.

Coming now to the tertiary languages, it appears that they have by no means discarded the more primitive methods of compounding roots. In English we make by juxtaposition such primary formations as *steamboat*, *mankind*, *downfall*, *outside*, *telltale*, *scapegrace*, *turncoat*, *skinflint*, *daredevil*, *marplot*, *childlike*, and *color-blind:* with which may be compared the Spanish *matamoros*, *perdonavidas*, *rompeesquinas:* the French *attisefeu*, *coupe-gorge*, *vaurien;* the German *Taugenichts*. In all these the constituent elements are severally significant, and their

* Ewald, cited in Müller, I. 338.

formula is *RR*. By agglutination we make secondary words like *Christendom*, *unbeliever*, *forbear*, *besprinkle*, *leaflet*, *manhood*, and *misplace*, in which one of the roots has lost its separate life, and all of which may be denoted by the symbols r^xR or Rr^x in various combinations. Many Aryan languages, as the Anglo-Saxon, Icelandic, Greek, Sanskrit and German, have retained this power in a very high degree. Every school-boy has laughed over the perfectly expressive yet unspeakable epithets of Aristophanes; one of which (Ar. *Nub.* 332) the German translator, in a spirit of agglutinative emulation, has rendered by *Ringfingerigschlendergelockvolk*. We have heard of a Sanskrit word of one hundred and forty syllables; and Rabelais, in some of his rollicking moods, has shown what good service the French can be made to perform in this direction. Many Aryan verbs, as the Latin *am-o*, can be conjugated from beginning to end on strictly secondary principles; and Professor Whitney cites, among others, the English word *un-tru-th-ful-ly*, the formula for which is $rRr(abc)^x$. The following table, adapted from Whitney, shows most instructively the succession of formations in the same language.

1. *mother tongue*,	PRIMARY,	$R+R$
2. *mother-tongue*, *dial-plate*,		RR
3. *dialplate*, *godlike*,	TRANSITIONAL,	Rr
4. *godly*, *forehead* (*forred*),	SECONDARY,	Rr^x
5. *fortnight* (or *fortnĭt*),	TRANSITIONAL,	r^xR^x
6. *breakfast* (*breakfasted* instead of *broke fast*),	TERTIARY,	r^xr^x

Nothing can more vividly illustrate the impossibility of making a clean-cut distinction between these typical forms, or between the languages which are characterized by the marked predominance of some one of them.

Not only do the tertiary languages juxtapose and agglutinate in order to form compounds and derivatives, but likewise in originating new inflections they are obliged to recur to the same primeval devices. The modern Aryan tongues of India, having lost their Sanskrit plural-endings, have been obliged to express themselves as their ancestors did, long ages before Sanskrit existed, saying *animal-mass* or *stone-heap* instead of *animals* or *stones;* and in many cases these compounds take a sin-

gular verb.* In Bengali we may have any one of a dozen words signifying "removal," "distance," or "cause," hung on as an ablative termination. But the point now under consideration will be best illustrated by an historical survey of the future tense.

Our English future is formed by two auxiliaries, signifying respectively "volition" and "obligation," the remarkable alternation of which has often puzzled grammarians, and is said to afford a sort of shibboleth whereby to distinguish the Englishman from Scotch, Irish, or Americans. The difficulty arises from the fact that the two auxiliaries have in different combinations lost their former independent power in different degrees. The original meaning of *shall* is very remarkable. Grimm, in his "History of the German Language," has shown that it was originally a perfect, like the Greek *οἶδα*, *κέκτημαι*, *ἄνωγα*, etc., and signified "I have killed." It is an instructive commentary upon that state of society in which murder was legally compounded by *wergeld*, or "man-money," that a verb signifying "I have killed" could have acquired the general force of "I owe," as naturally as *οἶδα*, from meaning "I have seen," came to mean "I know." The Gothic *skila*, of which *skal* is the perfect, meant, to divide or cut in pieces, whence the idea, involved in the Icelandic *skilja*, of "discrimination," or *skill*.† But *shall* has now become almost an empty word, although in Chaucer's "Court of Love," we still find the primary sense of "owing" in the phrase, "For by the faithe I shall to God." In the Low German languages it became early established as a future auxiliary; but in High German, where *werden* was employed instead, it still retains its meaning, *sollen* = "debere."‡ *Owe* itself we have not applied to the formation of futures, but in the conditional mood, which is a mere expan-

* Thus is to be explained the use of a singular verb with the plurals of Greek neuters, which originally were collective nouns, i. e. feminines in the singular. "Every Greek student knows that ἡ ἵππος means 'a body of cavalry.'" *Maskil le-Sopher*, p. 47.

† Compare the Latin *di-vid-o* with *vid-e-o*. The ideas of seeing and dividing are both expressed in *distinguish* and *discern;* and the Spanish *divisar* means "to recognize at a distance."

‡ It has the primary sense of *debere* only in the technical language of the counting-house; being the head of the "Debtor" column in accounts. In ordinary use, *sollen* always stands as an auxiliary, and its only sense is one of moral obligation, allied to that of compulsion, — intermediate between the sense of *ought to* and the emphatic sense of *shall*, in English.

sion of the future, we find the preterite *ought*. By a noteworthy analogy, in the Persian futures *be-berem*, "I shall carry," *be-bazem*, "I shall play," *bu-pursem*, "I shall ask," the integrated prefix *be* is derived from *bâyed* = "oportet," so that the principle is the same as in English.

To this method of forming the future we shall by and by return. The formation by means of *will* opens a still wider field for our consideration. The Latin *eris* was originally *es-ya-s*, in which the second root is the one which imparts to the compound its future significance. This root is either, as Bopp maintains, the same which appears in Sanskrit as *i*, "to wish"; * or, as Wüllner (Origin of Lingual Forms, § 46) believes, the same as the Sanskrit *i* or *ya*, "to go." In the first case the formation is exactly like the English with *will;* in the second case it resembles the French "je vais dire." But, as Mr. Clark acutely observes, it is probable that both Bopp and Wüllner are right, since it is difficult to avoid the conclusion, from the complete resemblance of the two roots in their primitive shape, that they are really identical. No better word than "go" could be used to express the idea of wishing. "To be after" a thing may even now mean either to desire it or to go towards it; and the word *go* is used in English in the sense of *mean* or *wish*, in the vulgar phrase, "I did n't go to do it."

Be this as it may, the future is built up in many languages by means of an auxiliary signifying "motion towards." † The ancient Egyptian prefixed *au*, the verb substantive, *a*, the personal pronoun, and *er*, meaning "towards"; and thus from *iri*, "to make," we have

au	+ *a*	+ *er*	+ *iri*	= *auairi*,	
"Am	I	towards	making	= I shall make."	
Ital. "Sono		per	fare."	(Bunsen, *Outl.* I. 188.)	

Now, as we saw above when discussing the meaning of *aya*, that the preposition *to* denotes both "motion towards" and

* Upon which are also founded the Greek optative, the Sanskrit potential and precative, the Zend potential, the Latin and Gothic conjunctives, and the Lithuanian and Old Bulgarian imperatives. See Clark, Comp. Gram., p. 261.

† I am told that the negroes in some of our Southern States are making a sort of contraband English, in which they conjugate as follows: pres. "I done it"; perf. "I done done it"; aorist, "I gone done it"; fut. "I *gwine* done it."

"purpose," we find in Malagassy the preposition *ho*, "for," employed as the future auxiliary, so that, instead of saying "will love," they say "for to love." The future auxiliary, in Harafoora, is *toro*, "in order that"; and, curiously enough, we find in modern Greek a future made by prefixing *νά*, for *ἵνα*, "in order that," an early example of which may be seen in a proverb of the eleventh century, preserved by Skylitzes, *Ἐώ σε ἔκτισα, φοῦρνε· ἐὼ ἵνα σε χαλάσω*, "I built thee, oven: I will destroy thee."

All these considerations support the conclusion that *ya*, *aya*, *i*, and *î* were varying forms of the same primeval root, used in the general sense of "going," "doing," "causing," or "being after something." Now we find this *ya* in the Skr. *da-s-ya-mi*, "I will give," Gr. *δώσω*, Lith. *dusu*, and in the older Latin future *aud-ia-m*, as well as in *fio*, which was originally *fu-ya-mi* = Skr. *bhav-a-mi*, and in which the *ya* has an inceptive force. (Don. *Varr.* p. 414.) But the Latin, having lost many of its older futures, supplied their place by forms compounded with *fio*, used like the German *werden*, and these new agglutinative forms early became integrated into a tertiary shape. Thus *ama-fio* became *amabo*,* as *ama-fui* and *ama-fiam* had become *amavi* and *amabam*. Now when in the last days of antiquity the Roman Empire was overrun by hordes of Teutonic barbarians, and the precincts of the Latin language were invaded by scores of Germanic dialects, along with the partial disintegration of society which thereupon ensued, symptoms of lingual disintegration also, here and there, began to show themselves. *Amavi* and *amabam*, weathering the storm, came out more compact than ever, appearing in Italian as *amai* and *amava*, in Spanish as *amé* and *amaba*, in French as *aimai* and *aimais;* but *amabo* suffered wreck, and disappeared forever from Romanic speech. How, then, did Teutonized Latin make good the loss of its future tense? We may be sûre that no meeting of Cortes, or assemblage of the Tiers-État, or conclave of Florentine burghers, ever voted upon the respective claims of *é*, *ai*, and *ó* to serve as algebraic signs of futurity. Neither did these determinative suffixes "grow out" from the constant root, as a branch grows from an axillary bud, — according to

* Key (Lat. Gram., p. 64) wrongly supposes the Latin future termination to be *habeo* instead of *fio*.

the absurd dictum of Schlegel, not wholly rejected even by Mr. Marsh.* Still less were they ever implicitly contained in some primitive linguistic germ, as Renan has boldly asserted, and as Mr. Farrar has unwarily reiterated.† Theories like these may indeed be written down on paper, but if they contain any meaning, I, for one, have never been able to detect it. It was in no such way that the Romanic futures were formed. But the Teutonic speakers of Latin, who, speaking German, would have said, "I have to love," ‡ took the most suitable auxiliary that

* Mr. Marsh (Lect. I. 338) thinks that *some* terminations may "germinate," since we have not actually traced quite *all* of them back to significant roots; and says that the resemblance of the genitive singular to the nominative plural, both in English and in Latin (*s, s; æ, æ*), cannot be explained by the doctrine of coalescence. It has already been amply explained; as any one may see who will compare Don. *Crat.*, p. 438, 443, and *Varron.*, p. 328, fol'g, with Garnett, p. 214–227. Moreover, when a theory, intrinsically probable, has sustained itself in nine hundred and ninety-nine cases, its chances of failure in the thousandth are not so alarming that we need run for safety to a formula which is too empty of meaning to admit either proof or disproof. Suppose Leverrier and Adams, when perplexed by the abnormal perturbations of Uranus, had abandoned the Newtonian theory with reference to that particular planet! But we prefer to believe that Mr. Marsh has here merely made a slip of the pen.

† "Language was formed by a process, not of crystalline accretion, but of germinal development. Every essential part of language existed as completely (although only implicitly) in the primitive germ, as the petals of a flower exist in the bud before the mingled influences of the sun and air have caused it to unfold." Farrar, Orig. Lang., p. 35. What is this but mediæval Realism? We talk of the "growth" of language and the "roots" of words. When a writer does not stop to translate his words into ideas, the jump from community of name to community of nature is quickly made; and so, because language "grows" and has "roots," we are gravely asked to regard it as a sort of tree! Will Mr. Farrar, leaving generalities, explain, for instance, in what sense the termination *bo* buds out from the root *ama?*

‡ In Gothic and Old High German the pres. indic. is often used for the future; Gothic, however, generally uses *haban.* In 2 Cor. xi. 12, Ulfilas translates ποιήσω by *taujan haba;* also *visan habaith* for ἔσται, John xii. 26. *Aigan* (= ἔχω, A. S. *agan*, Germ. *eigen*, Eng. *own*) was also used. Also *vairtha* = *werden.* In John xiv. 22, Ulfilas renders μέλλεις ἐμφανίζειν by *munais gabairhtjan.* In Icelandic also *munu* is used as a future auxiliary. Cf. the Scotch "Noo we *maun* totter doon, John" (Guest, Trans. Phil. Soc., 1845, p. 155), and Eng. *mean*, which may almost serve as a future auxiliary. It is, perhaps, doubtful whether μέλλειν is akin to these words, as Bopp and Sir E. Head think, or is, according to Hesychius, to be referred to μολεῖν, in which case μέλλω εἰπεῖν = "je vais dire" (Buttm. *Lexil.* s. v. βλίττειν). Bopp suggestively refers us to Skr. *manye*, "I mean," and compares ἄλλος = *anyas.* See Sir Edmund Head's admirable little treatise on Shall and Will, pp. 68–75. In the rabbinical Hebrew of the Mishna the future is often designated by *ghathid*, nearly equivalent to μέλλω. In the Southern dialects of England, *worth* = *werden* was once generally used to form futures. Head, p. 87.

came to hand, and with it built up, in similar wise, the new futures *amar-he*, *aimer-ai*, *amer-ho*. These are primary formations, analogous to those of the Chinese; and this is the only known way in which grammatical forms can arise. It was in just this way that the Romaic of the Eastern Empire, having lost both its perfect and its future, said henceforth ἔχω γράψει and θέλω γράψει instead of γέγραφα and γράψω.*

We find, therefore, two types of the future tense, — the "shall" type and the "will" type. The latter, as we have seen, in its various representations, *will*, *werden*, *ya*, etc., rests upon the notion of "motion towards"; the former, in its various forms, *shall*, *bu*, *owe*, *own*, *aigan*, *have*, etc., upon the singularly associated notions of possession and obligation. So thoroughly intermingled do the conceptions here become, that in the Greek verbals in τεος we find *ya*, though a future auxiliary of the "will" type, employed to express obligation. It is also noteworthy, as showing the paucity of the primeval devices by which such vast results have been accomplished, that the very same auxiliary is used, now to express past time, now to express future time. As *have* has been used at different times both as a past and as a future auxiliary, so the very *do*, *did*, by which the Gothic languages make their preterite tense, is used in Sclavonic to form the future, e. g. *bu-du*, "I shall be," literally, "I do to be." (Bopp, II. 708.) And in Greek, both the aorist ετύφ-θη-ν and the future τυφ-θή-σομαι contain the very same word, θη = *do*. In Old Sclavonic, we find *imam*, "to have," used as a future auxiliary, as in *imyeti imashi*, "thou wilt have." (Bopp, II. 886.) In Latin we find *scribendum est mihi* for "I have to write," and it is easy to see how the idea of possession passes through that of obligation into that of simple futurity. In exchanging *fieri* for *habere* the Romanic languages founded their new future tenses upon a new conception; but in order to accomplish this, they were obliged to resort to simple juxtaposition.

* In ancient Greek we have occasionally such forms as καλύψας ἔχω, βεβουλευκὼς ἔχω. Matthiæ, Gr. Gr. § 559. In Herodotus, VII. 49, we have εἰ ἐθέλοι καταστῆναι. Cf. I. 109. The Wallachian has formed its future with *velle* instead of *habere*, e. g. *voiu cëntâ*, "I will sing." Instead of θέλω, the Romaic usually employs θά, a contraction of θέλει νά. Head (p. 90) quotes precedents for the use of *habere* as a future auxiliary in Latin.

The process by which these primary tense-forms have become tertiary is too well known to need description. In the Romanic languages, with a few exceptions,* the futures are now as purely inflectional as the Latin *amabo*. The modern Greek who says *θὰ γράψει* thinks no more of *θέλω* than the old Roman thought of *fio* when using his future tense. But it may not be so generally borne in mind that in English also, as spoken in the thirteenth and fourteenth centuries, analogous symptoms of amalgamation began to show themselves. From sundry old authors, Mr. Marsh (Lect., I. 386) cites examples like *willi*, *woldi*, *kepi*, *hawy*, *cani*, *ne rechi*, *thenkestow*, *misdostow*, and *troustu*, for "I will," "I would," "I keep," "I have," "I can," "I reck not," "thinkest thou," "misdoest thou," and "trowest thou." In the Paston Letters we have "come for to *arescuyd* it"; in Lord Berners's Froissart, "it shuld *afallen*"; in Wyclif's Apology, *afelid* for "have felt"; in Piers Plowman, "why *nadistou*" for "why hadst thou not." Finally, in an old poem, the amalgamation is so complete that a second pronoun can be added without fear of tautology, and we find *thu canstu*, literally "thou canst-thou."† Now if this integrating process had begun two or three centuries sooner, and if it had not been so quickly checked by such conservative forces as the invention of printing and the translation of the Bible, it is highly probable that English would have produced a more or less varied system of inflections. Obviously the influence of written characters upon spoken language is, to preserve the integrity of existing forms; and this must be

* But we still have, as mementos, the Portuguese *dar-lhe-hei*, "I will give him," and in Provençal such phrases as this: —

"E pos mon cor non aus dir a rescos,
Pregar vos *ai*, s'en aus, en ma chansos."

Compare the Sardinian *appu essi*, etc., and the Spanish "*castigar* los *hé* como avran a far." Nevertheless, this origin of the Romanic futures has been idly doubted by Ampère, *Hist. de la Litt. Française*, p. 160.

† "Wherfor I prei zow that ze *nul not* bugil ous, that ze send to ous warning whether schul we have eny help or no." Harrard's Letter on Glendower's Rebellion, in Ellis's Letters, Second Series, Vol. I. Letter IV., p. 15. Here *nul* = *ne will*. In Chaucer's Romaunt of the Rose, 3741, we have *nolde* for *ne wolde*. A similar agglutination of personal pronouns occurred in Provençal: e. g. "No sai en qual *guisa-m* fui natz." "Per *aisso-t* tem amors." "Lo jorn *que-ns* ac amor amdos eletz." "Tolre *no-m* podetz que *no-us* am." Lewis, p. 154. In German, as late as Luther's time, we have *wiltu*, *mustu*, *woldich*, *vasthi*, *woldhi*, *kondhi*. See Marsh, I. 387, who also cites instances in Icelandic.

duly remembered by those who maintain that, according to the views here expounded, the Chinese ought long since to have lost its primary structure.* The causes which have hitherto detained one third of the human race in social as well as linguistic nonage, are too complicated to be discussed here. But we may note, first, that ideographic characters were used in China at a much earlier period than in any other country, except perhaps in Egypt; secondly, that the ancestral Aryan and Semitic languages had both become tertiary long before Devanagari, Cuneiform, or Phœnician alphabets were invented; thirdly and principally, that a Chinese character, standing as it does for a whole word, and not for a constituent letter or syllable, must exert far greater influence than could ever be exerted by a set of alphabetic symbols, in stereotyping the word which it represents. As Renan has well observed, — though without perceiving the force of his own remark, — it is by no means accidental that the two great literary languages which have retained their primary structure, Chinese and sacred Egyptian, are just those two languages which have employed ideographic instead of phonetic symbols. The Japanese, which had become secondary before it adopted the Chinese characters, was obliged to give those characters a syllabic or phonetic value. And the demotic Egyptian, which in contrast with the sacred language may be pronounced rudely secondary, has given a phonetic power to the mutilated hieroglyphics in which it is written. In Europe the influence of written symbols, lately increased and multiplied a thousand-fold by the invention of printing, the education of the formerly ignorant classes, and the dissemination of popular literature, has been active alike in preserving the inherited inflections of French, and in impeding the genesis of new inflections in English. Were written language to follow the lead of ordinary speech, instead of adhering to archaic traditions, the process of linguistic destruction and renovation would go on as

* "Les seules langues monosyllabiques que nous connaissons, celles de l'est de l'Asie, ne sont jamais sorties de leur état." Renan, *Langues Sémitiques*, I. 98. Farrar, Orig. Lang. 184. In *L'Orig. du Langage*, p. 111, Renan thinks it better to soften the statement by inserting "franchement" after "sorties." At best this is only the flimsy argument of Flourens about the dogs on Egyptian monuments; and the sensible remarks of Lewes (Studies in Animal Life, Chap. V.) will apply to Renan as well as to the Cuvierians.

perceptibly, though by no means so rapidly, in English as in many barbarian dialects. We should have had such interrogative conjugations as *havvi*, *havye*, *hazzy;* imperatives like *dōndo'ee* and *gimme*; and our definite article, as in the cognate Danish and Swedish, would have lapsed into an inflectional modification in such words as *thempress*, *thevangel*, *thapostle*.*

These considerations enable us at last to deal with sundry phenomena presented by the Semitic languages, which have not hitherto been brought into conformity with the general principles of linguistic evolution. The efforts of Bunsen, Donaldson, and others, to explain the existing structure of these languages as resulting from the excessive grinding-down of a once complicated set of inflections, — whereby their career would be assimilated to that of the Aryan languages, — has resulted in failure. That the poorly inflectional Hebrew and Ethiopic represent a more primitive state of Semitic speech than the richly inflectional Arabic is, in view of the facts now to be cited, the only tenable conclusion. First, the transparency of Semitic formations is unlike anything which can be seen in languages, like English and French, which have once had a full system of inflections. Secondly, the process of modifying the meaning of words by internal vowel-changes cannot be explained, as in the English *ring*, *rang*, *rung*, as resulting from the phonetic influence exerted by inflections now lost. Thirdly, the Hebrew, and especially the Ethiopic, construct-genitive can hardly be explained as due to the effect of integration upon a previously developed genitive. It is rather a genitive case arrested in its development. Müller has acutely demonstrated that formations like the Hebrew *Malk-i-zedek*, or the Punic *Hann-i-Baal*, cannot be compared with a formation like the Italian *fratelmo*, where

* Marsh, I. 388. Compare the Wallachian *domnul* for *dominus ille;* Italian *fratelmo* = *fratellus meus, patremo* = *pater meus;* Hungarian *atya-m*, etc.; and the agglutinated articles in Albanian and Bulgarian. The influence of writing in retarding integration is noticed by Trench (English, Past and Present, p. 24), and by Whitney (pp. 472, 473), who thus explains the fact that English words anciently imported from Latin and Greek, as *mint* from *moneta*, *church* from *kyriake*, *alms* from *eleemosyne*, etc., are highly integrated, while words recently adopted have remained comparatively intact. See also Müller's remarks on *Yes'r* and *Yes'm* (I. 224); and compare A. W. Schlegel, *Obs. sur la Langue et la Litt. Provençales*, p. 18.

the integrated ending was once an adjectival pronoun equivalent to a true genitive. Fourthly, the much greater conspicuousness of onomatopœia in the Semitic than in the Aryan languages shows that their words have better retained their primitive shape. Fifthly, the vast number of notions expressible by slight modifications of single Semitic root * is a feature characteristic, not of highly integrated languages, like French or English, but of languages, like Annamitic and Burmese, which have never arisen from their primitive meagreness.

In view of these facts, a comparison between the older Hebrew and the younger Arabic becomes very instructive. Let us bear in mind that the Hebrew became a written language at least one thousand two hundred years sooner than the Arabic, and that the influence of writing in retarding integration is acknowledged to be especially powerful in the case of the Semitic alphabets. (Renan, p. 437.) Now Arabic is far richer in inflections than Hebrew. The forms of the verb, which are five in Hebrew, and have been reduced to three in Aramæan, are nine in Arabic. In the latter language there are more compound tenses. In Syriac there are but few traces of a dual; in Hebrew we find it in some classes of nouns; in Arabic it is applied to adjectives, pronouns, and verbs. "The employment of certain conjunctions in regimen and with affixes, which is a characteristic feature of Arabic, is also found in Hebrew, but only in a rudimentary stage." (Renan, 424 – 426.) From all these data, which Renan has most skilfully generalized, he draws the incorrect conclusion that — since the Semitic languages have become richer and richer in inflections with the progress of time, and since, moreover, they have not given birth to analytic derivative dialects, as the Latin gave birth to French, and the Anglo-Saxon to English — they are therefore the product of mental processes totally different from those which have produced the Aryan languages, and can in no wise be explained by the same formula of development.

* In Hebrew, for instance, "the word עָרַב, in its various conjugations, means to mix, to exchange, to stand in the place of, to pledge, to interfere, to be familiar; and also to disappear, to set, and to do a thing in the evening; besides all this, with various vowel modifications, the same three letters mean to be sweet, a fly or beetle, an Arabian, a stranger, the weft of cloth, the evening, a willow, and a raven." Farrar, Chapters on Language, p. 229.

At the present stage of our discussion, the way out of this difficulty is short and easy. Although the mother-Semitic was a tertiary language, no less than the mother-Aryan, it would be very misleading to regard them as equally developed at the outset. *The mother-Aryan was the product of a far more extensive antecedent process of agglutination than the mother-Semitic.* While the former may be supposed, in its secondary stage, to have resembled such richly agglutinated languages as Telugu or Turkish, the latter must be supposed to have resembled such poorly agglutinated languages as Burmese or demotic Egyptian. Its progress, therefore, after attaining the tertiary stage, would be toward the further development of inflection. The Semitic vowel-changes show how meagrely supplied the mother-tongue must have been with determinative signs. In Chinese this meagreness is partly compensated by an elaborate system of tones. Probably the early speaker of Semitic similarly pronounced his vowels with an altered stress, which often leads to a vowel variation, as, in Hebrew, "pattach," lengthened into "qamets," may become "qamets-chatuph." Now in Hebrew the development of tertiary forms was early stopped by the introduction of writing and literary culture ; * while the progress of Arabic for the next twelve centuries was not toward so-called "analysis," but toward a more extensive production of forms by amalgamation. The redactions of the Koran, under Othman and Abdalmalek, put a final stop to this.

Lastly, the progress of the Semitic languages, since they stopped amalgamating, has been toward further integration by the dropping of inflections and vocalization of consonants, after the manner of Aryan tongues, as we had occasion to observe at the beginning of this discussion. And let it be further noted that the Semitic dialect which was latest checked in its development of tertiary forms, and which therefore arrived at relatively great inflectional complexity, — namely, the Arabic, — is just the one which most resembles the Aryan languages in its recent tendency towards "analysis." Even Renan compares the relation of new and old Arabic to the relation of new and old High German.

* See also, for the conservative influence of a priestly caste or fraternity, Whitney, pp. 148, 149, 159.

That the history of the Semitic languages presents no such striking case of change as the change from Latin to French, from Anglo-Saxon to English, or from Vedic Sanskrit to Hindustani, may readily be granted. But for a most intimate mixing of races, such changes would not have occurred in the Aryan domain. Except in the case of Amharic, no Semitic language is known to have been adopted as a vernacular speech by a non-Semitic race, as the Latin was adopted by Kelts, Iberians, and Germans. And in the Amharic we do find the nearest approach to parallelism with the Romanic dialects which the Semitic domain affords.*

To sum up this long argument: we have seen good reason for believing that by a universal process of integration primary languages tend to become secondary, and secondary languages tend to become tertiary. We have observed that tertiary languages are far from rejecting compounds and derivatives framed after the primary and secondary patterns. We have shown that lost inflections can be replaced only by a recurrence to the primary methods of juxtaposition; and we have seen the amalgamative process eliciting new tertiary forms from these juxtapositive compounds, save where it is checked by assignable retarding influences. Finally, we have exhibited the working of the same general processes in the Semitic languages, which have been wrongly claimed as constituting a separate domain of human speech, governed by dynamic laws peculiar to itself. Though the evidence here given is but a small fragment of what might be adduced, it is still quite sufficient to illustrate and confirm an inference which the results of grammatical analysis have long since rendered inevitable. Thirty-three years ago that incomparable philologist, Richard Garnett, saw clearly that if inflections were ever independently significant, the structure of all languages must once have resembled that of the Chinese. (Essays, p. 109.) Bopp and his fellow-workers, in proving the first point, proved also the second; and it is only by implicitly rejecting the one that Renan and his followers† are enabled explicitly to reject the other.

* The formation of the so-called "constructive mood" in Amharic may perhaps be compared to the formation of the Romanic futures. Isenberg's Amharic Grammar, p. 69, cited by Garnett, p. 297.

† M. Franck accepts Renan's theory, "parcequ'elle est la plus conforme à la

II.

We have thus arrived at a vantage-ground from which we may contemplate more nearly than of old the beginnings of human speech. Much of the ancient discussion upon this subject is at once seen to be no longer relevant. As long as inflections and modifying particles were believed to be arbitrary, they might well have been deemed the offspring of inventive contrivance; not so when they are known to be significant. The intricate grammatical system of Greek or Sanskrit might well have been thought a fit subject for miraculous revelation; not so the meagre and artless combinations of Chinese or Tungusian. Over the comparative claims of nouns, verbs, and prepositions, to be considered the primal elements of speech, we need no longer puzzle ourselves; for we know that in a primitive language there are neither nouns nor verbs, neither adjectives nor adverbs, but only naked roots, which may be used to denote either substance or attribute, position or action, as circumstances may chance to require.* Let us consider how the Chinaman would say, "The sun is shining through the clouds." He would take the word for *sun;* a word meaning *bright*, *brightly*, *brightness*, or *to be bright*, according to the context; a word meaning *passage*, or *to pass;* and the word for *cloud*, coupled with some such expression as *multitude*, *heap*, or *flock*, to serve as a sign of plurality; and heaping together these raw materials, would make the statement, "Sun bright pass cloud-heap." Crude as such a language undoubtedly is, we may rest assured that the winged words of our exquisite Aryan speech at first limped and halted with equal awkwardness. An analysis of the magnificent verse of Dante,

"Io non piangeva, si dentro impietrai,"

would show us that its wonderful tissue is woven of very humble stuff, — a word for "stone," a word imitating the sound of

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dignité de notre nature et à sa mystérieuse grandeur." *Études Orientales*, p. 404. How long are we to see scholars, from whom better things might be expected, childishly accepting or rejecting theories, not because they are upheld or contradicted by established facts, but because they conform to, or conflict with, sundry preconceived notions of "dignity" or "fitness"?

* "Auf dieser urältesten Stufe sprachlichen Lebens gibt es also, lautlich unterschieden, weder Verba noch Nomina, weder Conjugation noch Declination." Schleicher, *Die Darwinsche Theorie*, p. 22.

weeping, and a few demonstrative ejaculations denoting spatial proximity or remoteness. It is from such lowly beginnings that language has arisen; and when we seek to account for the genesis of human speech, we must forget for a while the numberless delicate contrivances by which civilized man gives unerring expression to every shade of thought. We must forget our nouns and verbs, our inflections, prepositions, and auxiliaries, and search for the meaning latent in simple, ungarnished roots. We must turn our eyes from the architecture of the sacred edifice, that we may scrutinize with unbiassed vision the rugged blocks out of which it has been reared.

But before we can properly arrive at a final residuum, one further element must be eliminated from the problem. The fact that all abstract words whatever, as well as all concrete words denoting supersensuous objects or conceptions, have been formed by the potent agency of metaphor out of words with a purely physical import, is too thoroughly established to need more than a passing illustration. That *soul* and *sea* are derived from the same root, that *ghost*, *yeast*, *gust*, *gas*, and *geyser* have a common origin, that words like *intellect*, *conceive*, *admire*, *permit*, *contrition*, *attention*, etc., are built up out of wholly material notions, has been proved and illustrated over and over again. From the bare notion of "moving," we get not only words signifying "furniture" (Fr. *meubles*), the Skr. *sarit*, "a river," *sara*, "sap," *drapsa*, "a drop," but also *age* and *eternity*, and the most abstract of the many names for the Deity.

The explanations of the word *God* in our popular dictionaries are one and all untenable. Grimm has shown the common derivation from *good* to be impossible; and the identification with Persian *Khoda*, from Zend *qvadata*, Skr. *svadata*, Lat. *a se datus*, has met, at Aufrecht's hands, with no better fate. Müller more plausibly suggests that it was formerly a heathen name for the Deity, which passed into Christian usage, as Lat. *Deus* became Fr. *Dieu*.* There can, I think, be little doubt that *God* is iden-

* Bunsen, Outlines, I. 78; Grimm, *Deutsche Mythologie*, p. 12; Müller, Lectures, II. 302. — Donaldson (New Cratylus, p. 710) would connect *God* with καλός, and θεός with τίθημι; but this is arrant guesswork, and the latter name was long ago proved to be identical with Lat. *deus*, Skr. *devas*, from *div*, "to shine," being a personification of daylight. See Lassen, *Indische Alterthumskunde*, I. 756.

tical with *Wodan*, the name of the great Northern deity. *Guillaume* and *William*, *guerre* and *war*, *guardian* and *warden*, *guile* and *wile*, will at once occur to the reader as analogous instances; and a similar change is seen in the Armorican *guasta* and Ital. *guastare*, as compared with Lat. *vastare*, Eng. *waste;* and in the Eng. *quick*, Goth. *quivs*, Lat. *vivus*. Paulus Diaconus tells us that the Lombards pronounced *Wodan* as *Guodan*.* The initial digamma, consisting of a combined guttural and labial (*F*, *kv*, *gu*, *qu*, *hw*, *sw*, etc.), is resolved into its constituent elements, one of which is usually eliminated, so that *Guod* is differentiated into *God* and *Wod*. The surviving element is frequently vocalized, becoming a mere breathing, as in *Odin*, with which we may compare the change from Georgian *ghwino* to Lat. *vinum* and Gr. οἶνος. Now *F-Odin* is derived by Grimm from *wuotan*, Lat. *vadere*, Eng. *wade*, "transmeare, cum impetu ferri," and thus signifies the Prime Mover, "qui omnia permeat," the *pervading* source of the dynamic phenomena of the universe; or, as Dante says: "La gloria di Colui che tutto muove." Strictly in keeping with this signification is Odin's character as the storm-spirit or inciting genius of the wind, in which he answers to the Greek Hermes, or Vedic Sarameyas, "Son of the Dawn." † This is at bottom a purely sensuous group of notions. Yet, as developed by modern philosophy, the conception of *Odin* is far loftier and more adequate than those expressed by Θεός, *Jupiter*, *Dyaus;* ‡ as the solar ray (*Tiws* = Ζεύς), though doubtless the immediate source of all life and motion in our little group of worlds, is nevertheless itself but a limited manifestation of that limitless Power which is revealed in

* And we find *Ludoguicus* for *Ludovicus* in Erchempert, *Hist. Langob.* 11, Pertz, III. 245. In Germany and Lorraine we have the town names of Godesberg, Gudenberg, Godensholt, and Vaudemont, all derived from *Wodan*. In the Westphalian dialect, *Wednesday* ("day of Wodan") is called *Godenstag* or *Gunstag;* in Nether-Rhenish, *Gudenstag;* in Flemish, *Goensdag*. See Thorpe, Northern Mythol. I. 229; Taylor, Words and Places, 323; and cf. Grimm, *Gesch. der Deutschen Sprache*, 296. The Westphalian Saxons wrote both *Guodan* and *Gudan*. In view of such a convergence of proofs, I am surprised that this etymology has not been sooner insisted on.

† For the explanation of Hermes and his correlatives, see Müller, Lect. II. 492; Cox, Manual, 85, fol'g; Baring-Gould, Curious Myths, II. 152, fol'g; Mackay, Religious Development of the Greeks and Hebrews, I. 260–273.

‡ For the physical meaning latent in יהוה see Oort, Worship of Baalim, Chap. II.; and cf. Mackay, op. cit. II. 414–426.

ceaseless rhythmical activity throughout the length and breadth of the Kosmos.

The word *truth* affords another illustration, which may even now be worth citing, since writers are still to be found wasting eloquence over Horne Tooke's derivation from *troweth*, and his sophistical inference τὸ ἀληθές οὐ φύσει ἀλλὰ νόμῳ. Its correlative in Sanskrit is *dhruwa*, from *dhru*, "to place or establish"; whence also Goth. *triggvus*, "secure," and Germ. *trauen* and *treu*.* While, according to Pott, the Lat. *verus*, Germ. *wahr*, Welsh *gwir*, Gael. *fior*, Sclavon. *viera*, is from the same root which appears in Germ. *wehren*, O. H. G. *warjan*, Welsh *gwared*, Ital. *guardare*, and means that which is "covered," *ergo* sheltered, or secure from attack.

It being thus apparent that metaphor may educe the grandest abstract conceptions from the humblest material notions, we have now only to inquire how the roots expressive of such notions were produced. Of the various recondite, mystical, or incognoscible theories which have been framed, — chiefly in Germany, — concerning the origin of language, we have not time to speak. Max Müller's doctrine, that roots are "phonetic types," must be pronounced vague and inadequate. The term "phonetic type" can mean nothing but a representation, in vocal sounds, of an objective phenomenon which invites attention, or of a subjective feeling which demands expression. To say that a root is a "phonetic type," is therefore merely to state the problem without solving it. To explain the genesis of language, it is not enough to say that, as every substance when smitten rings response to the blow, so the human mind attunes itself to concord with the sensory percussion from without. It must be shown why this is possible, and how it comes to pass. It must be shown in what way mere vocal utterances can become the fitting signs of external and internal phenomena; by what subtle alchemy a rhythmic pulsation of the air is transmuted into the nimble messenger of thought and feeling. In the present state of our knowledge, amid the confusion of ideas in which this problem is entangled, its solution may be impracticable, and must needs be imperfect. Yet a theory which would fain satisfy

* Garnett, p. 28. In the Semitic languages also, "l'idée du vrai se tire de la solidité, de la stabilité." Renan, *Langues Sémitiques*, I. 23.

us by a mere phrase, like "phonetic type," is, as Professor Whitney (p. 427) observes, utterly unphilosophical and infertile.

To explain the process whereby articulate sounds have been erected into symbols of mental and physical phenomena, a legitimate hypothesis has been framed, according to which a large class of words were originally mere representations of the sounds given out by animate or inanimate objects. Sounds uttered in imitative response to external sounds or noises passed into currency as vocal signs of the phenomena whereof the archetypal sounds were chiefly characteristic; and the concrete material designations thus produced were afterwards metaphorically applied to the expression of abstract and immaterial conceptions; while all words not thus originated were mere interjectional utterances, serving to give vent to the feelings aroused by the sight of external objects.

The Bow-wow Theory — though it has been received by many eminent philologists with indignant ridicule and foolish appeals to sentimental prejudice — is nevertheless the only hypothesis yet proposed which alleges a *vera causa*. Every one knows that many words have come from onomatopœic roots, though few are aware to what an extent the process may be traced. Not only is it that words like *cackle*, *caw*, *croon*, *snarl*, *grunt*, *chirp*, *twitter*, *sigh*, *groan*, *shriek*, *sneeze*, *crash*, *bang*, *whiz*, *puff*, *snap*, *crunch*, *buzz*, *hiss*, *hum*, *twang*, *jingle*, *chink*, *rustle*, *whisper*, *clatter*, *gurgle*, *bubble*, *rumble*, etc., are manifest imitations, but also many words indicative of no sound or noise whatever, many words expressive of purely abstract notions, may safely be referred to an imitative source. They who have carefully noted the wanton freaks which metaphor delights in, and who know, moreover, that all the indigenous words in all the Aryan languages have arisen from a few hundred primitive roots, will not be surprised to find a single word begetting legions of offspring whose resemblance to each other and to their sire is far from obvious. Every one has read of the Arabian genie who became in succession a wolf, a cock, an eagle, a pomegranate, and lastly a raging fire which burnt up the daughter of a sultan. The metamorphoses of language are not less marvellous. We have already seen *glory* becoming the badge of hopeless servitude. We may next contemplate a venerable root, *mar*, — ex-

pressive of "grinding down," and doubtless imitated from the sound of that mechanical process, — producing in divers languages at least one hundred fifty distinct words (to say nothing of minor modifications), among which, in English alone, are comprised terms so different as *mill*, *meal*, *maul*, *moil*, *mould*, *mortal*, *murder*, *member*, *meer*, *marble*, *Mark*, *milk*, *blaspheme*, *blame*, *smart*, *mellow*, *melt*, *malt*, *mild*, *ambrosia*, *travail*, *remorse*, *mallet*, *memory*, and *martyr*.*

In like manner numerous words, retaining naught that is exclamatory in their forms or meanings, have nevertheless been developed from interjections. From the root *ach* are derived words expressive both of emotional discomfort and of material sharpness as well as swiftness; among which, in various languages, are Gr. ἄκω, ἄκανθα, ἄχος, Eng. *ache*, A. S. *ege*, *egeslich*, Icel. *ecki*, Germ. *ekel*, *ecke*, *jucken*, Eng. *itch*, Icel. *eggia*, Lat. *acuo*, *acus*, *acies*, Gr. ἀκωκή, ἄκρος, ὠκύς = Skr. *açus*, which brings us to *açva* = ἵππος = *equus*, wrongly claimed as due to direct imitation. † Onomatopœia is therefore far from being a sterile principle; nor is it easy to indorse the objection that imitative sounds, even in their crudest shape, are not yet language. Müller tells us that "there are cockatoos who, when they see cocks and hens, will begin to cackle, as if to inform us of what they see." The inference, that an imitation of cackling cannot be language, proves somewhat too much; for we cannot consent to banish a considerable number of decorous words and pithy sentences from the category of language, merely because certain parrots have a habit of repeating them. So, when the Englishman at dinner in China, craving information as to the nature of the dish before him, said interrogatively, *Quack, quack?* and received the astounding answer, *Bow-wow!* Müller doubts whether such talk as this deserves the name of language. But the doubt rests upon a confusion of ideas. When the duck says *quack*, no language is used, because the sound in question corresponds to no general concept. But when man in framing language says *quack*, he is performing a

* See the details in Müller, II. 331 – 350; to which I have added *travail*, derived on Garnett's authority, through the French, from Kymric *trafael* = *tra* + *mael*, "overwork."

† Compare Curtius, *Grięchische Etymologie*, p. 122, with Garnett, p. 64, and Müller, II. 75.

rudimentary act of abstraction. He is designating an object by one of its conspicuous marks, and is therefore using language no less than when he calls the moon a "shiner": Lat. *luna*, *Lucina*, from *lucere*, *lux*. The word *moo** would have been as intelligible as any of the names for a cow; and would have been quite as capable of producing derivatives, or entering into compounds, signifying milk, beef, leather, horn, boots, a shield, a bright-eyed maiden, the nourishing earth, clouds with swelling udders, distant thunder, bovine stolidity, and cud-chewing revery. A brief examination of Indo-European mythology will show what scanty materials suffice for the language-maker; and we may be sure that in his hands a few homely imitative roots would soon be wrought into numberless forms of quaintness and beauty.

But it must not be supposed that onomatopœia ought, upon this principle, to be traceable in the majority of modern words. In current use, as we have seen, words speedily lose their primitive form and their original significance. *Episcopus* becomes Danish *bisp;* and we talk of *ostracism* without thinking of oyster-shells. Words are built up, pulled to pieces, and conjured with, until we have *stranger* from *ex*, and *history*, *wit*, and *Veda*, from the same root. The whole Aryan language must have gone through this wearing and tearing process many times before it acquired its present structural peculiarities. Nor is the imitative principle unlimited in its scope and powers. After language has acquired a sufficient foothold for derivatives to be formed, metaphor begins to assert its sway. It is more convenient to name many objects and actions from attributes less vague and ambiguous than the noise which they make or by which they are accompanied. In highly developed languages the traces of onomatopœia must, on any hypothesis, be comparatively slight; and it is both unphilosophical and superfluous to do what Mr. Wedgwood and Mr. Farrar have too often done, — to ignore established etymologies and acknowledged linguistic affinities, and to override phonetic laws, in the eager attempt to gather illustrations of the Bow-wow Theory. Mr. Wedgwood, for example, identifies *hound* =

* This sound is now, in German, used by children, — and recognized by adults, even in literature, as the legitimate term, in "baby-talk," — for "cow." Likewise, *mä* for "sheep." Cf. the Eng. slang term *ki-yi* for "puppy."

Germ. *hund*, with the Esthonian *hunt*, "a wolf," and derives the latter from Esth. *hundama*, "to howl," "corresponding to O. H. G. *hunon*, 'to yelp like a fox,' and Sc. *hune*, 'to whine.'" Now such a point of resemblance between languages radically dissimilar is always likely to be accidental,* and in this case is undoubtedly so. Whether the Esthonian *hunt* is onomatopœic or not, we shall not attempt to determine. But the Germ. *hund* has a very different origin, — no other, in fact, than *hinthan*, "to catch," Swed. *haenta*, Eng. *hunt*, Lat. "*prehend*-o," the *hound* being the animal "qui capit feras." (Grimm, *Deutsche Gramm.*, II. 35.) From the same source comes the Skr. *çvan*, Zend *çpan*, Gr. *κύων*, Lat. *canis* (Burnouf, *Sur le Yaçna*, I. lxxii., lxxxi.), which Mr. Farrar claims as imitative. To assign for *dog* a mimetic origin because the Icelandic *doggr* sounds like a growl, — as Mr. Farrar is inclined to do, — is to violate the first principles of etymology; for the terminal *r*, in the Icelandic form, is no part of the original word, being merely the nominative case-sign, which in several other Aryan languages appears as *s*. Thus *foot* is in Icelandic *fotr*, and *Brunhild* is *Brynhildr*. This *r* was originally a pronoun of the first person. In spite of the identity of the initial letters, I am inclined to believe that the common opinion is correct which derives *dog* from the mother-Aryan *dak*, which appears in Skr. *dak*, "to bite": if *daughter* = *duhitri*, *dog* may certainly come from *dak*. As to the Sanskrit words *rudatha* and *bhacha*, for "dog," they are very likely mimetic. *Crane*, Swed. *trana*, Germ. *Kranich*, which is also claimed by Mr. Farrar, means simply "the long-shanked," as is shown by the Welsh synonyme *garanawg*, from *gar*, "a shank." Mr. Wedgwood is disposed to connect ἵππος with Eng. *hobby*, Fr. *hobin*, Frisian *hoppe*, supposed to come from the cries *hait*, *whoa*, *huf*, and *haap*, used in driving a horse; but ἵππος is well known to be identical with Skr. *açva*, "the swift," which is indeed, as we have seen, most likely onomatopœic, but is not to be disposed of after the summary fashion

* "L'étymologie reste un jeu arbitraire tant que l'on n'a point déterminé expérimentalement les lois d'après lesquelles les sons se permutent en passant d'une langue à une autre; c'est la connaissance de ces lois qui donne à la philologie comparée dans le sein de la famille indo-européenne un si haut degré de certitude." Renan, *Langues Sémitiques*, I. 467. Compare Turgot, *Œuvres*, Tom. III. p. 33.

of these etymologists. *No* is explained by Mr. Wedgwood as a development of the sound made by an infant when he shuts his teeth by way of refusing the breast: our negative shake of the head, he thinks, has a kindred origin. We moved our heads to and fro when we rejected the proffered nourishment, and we therefore continue through life to shake our heads in token of denial!! *No* is compounded of the A. S. *ne* and *â*, (Goth. *ai* and *aivs*, Lat. *ævum*, Gr. *αἰών, αἰεί*, Eng. *ever*), and therefore originally meant *never*. The latter of these roots is derived by Graff and Kuhn from our old acquaintance *i* = *ya*, "to go." *Ne*, the former, is a form of the demonstrative *na*, signifying remoteness, and used to express many ideas not involving negation, as in Greek, for instance, where it is the sign of the accusative. Perhaps no example could better illustrate the utter capriciousness of fancy with which many mimetic derivations are assigned. The attribution of certain powers of expression to particular vowels and consonants is very hazardous. When we are told that, in Mandshu, *ama* means "father," and *eme* "mother," because *a* is the stronger and *e* the weaker vowel,* we need only point to the Japanese *fafa*, "mother," and *titi*, "father," where the distinction is reversed. When Mr. Farrar cites the roughness of Germ. *entsetzen*, "terror," in behalf of the Bow-wow Theory, we need only refer to *alarm*, which is not rough, but smooth; to say nothing of the fact that *entsetzen* merely means a "displacement." And when he adduces the pleasant-sounding *minstrel* as a case of reflex onomatopœia, we must — in view of the origin of *minstrel*, through Lat. *minister*, from *minus*, which means "less," and has nothing to do with music — consider him misled by his pleasant aural associations with the word.

The survey of these erroneous derivations shows us that the bow-wow principle has been to a great extent supplanted and obscured in the Aryan languages by formations based upon a more abstract set of conceptions. Thus the *moon* is called the "measurer," *luna* the "shiner," *canis* the "taker," *dog* the "biter"; and, in spite of Professor Key and Mr. Farrar, there is nothing absurd in the opinion that *cow*, *βοῦς*, Skr. *go*, is the "go-er"; for we must remember that in Greek small

* Compare the curious speculations of Leibnitz, *Nouveaux Essais*, Livre III. Chap. II., with Plato, *Kratylos*, 426, 434, 435.

cattle, such as sheep and goats, are called τὰ πρόβατα, "the forward-walkers." Mr. Garnett has admirably stated the general principle: "Grimm has shown that, in English and German, *fox* simply denotes 'hairy'; in Sanskrit, the feminine noun *lomasā*, from *lomas*, 'hair,' means a fox; while the masculine *lomasă* denotes quite a different animal, a ram. In other languages, as in the Icelandic *refr*, and Persian *roubah*, the idea of hairiness quite disappears, and Reynard is designated by another single quality, 'thievishness.'* The reason of this is obvious. Though a fox is an individual, he is composed of an aggregate of particulars, which no simple word is capable of expressing. We therefore denote this complex idea by a term expressive of some simple quality; and though the term may in itself be equally characteristic of a rat or a squirrel, it answers every purpose of oral communication, as long as people agree to employ it in the same sense." (Essays, p. 27.) With what seeming caprice this principle of nomenclature works may best be seen in the etymology of the words *woman* and *wife*. The plural of *woman* is written *women*, from the natural but mistaken notion that the termination is the same as the English word *man*.† It is the Sanskrit formative suffix *man*, Lat. *mon*, *min*, Gr. μονη, μων, μην, and μιν. *Wo-man* is identical with Lat. *fe-min-a*, Skr. *we-man*, a "weaver"; with which may be compared our use of *spinster*. It was hardly more strange that the primitive Aryans should call the woman a "weaver," than that they should call the *daughter* of the household a "milkmaid"; yet this derivation of the latter word has been minutely and incontrovertibly proven. *Daughter*, Gr. θυγάτηρ, Skr. *duhitri*, is from *duh*, "to milk," the suffix *ter*, τηρ, *tri*, being like the suffix *man*, in denoting the agent who performs the action expressed by the substantive root.‡ It is worthy of remark that, in Chinese,

* The Sanskrit designates a very different animal by this attribute: Skr. *mushas* "the stealer," = Eng. *mouse*.

† Just as the plural of *Mussulman* was formerly written incorrectly *Mussulmen*.

‡ What shall be said of the supposed connection between *homo* and *humus*? To compare the two words directly with each other, and then to waste good rhetoric over the conception of man as "earth-born" or "humble," is, I believe, preposterous. An analysis of the words in question leads to a different conclusion. The Sanskrit suffix *mi* denotes in many cases the "place where," as in Goth. *hai-m-s*, Eng. *ho-me*, "a resting-place" (Gr. κει in κεῖμαι). So the Skr. *bhu-mi-s*, Lat.

woman is regarded as the "sweeper," since in the hieroglyphic system of that language she is represented by a broom. As for *wife*, A. S. *wif*, Germ. *weib*, it is etymologically connected with A. S. *wefan*, Germ. *weben*, Skr. *we*, Eng. *weave*.

Countless examples such as these show that the Aryan languages owe the larger part of their present vocabulary to a very different principle from that of onomatopœia. But this conclusion, far from invalidating the Bow-wow Theory, serves only to demonstrate the impossibility of regarding the earliest Aryan speech as in any true sense of the word a primitive language. When Max Müller proves that a large portion of the words claimed by the mimetic school have in reality started from such abstract roots as "go," "shine," "measure," etc., he has indeed carried by assault an untenable position which should never have been occupied; but he has by no means won the battle, which, if it is ever to be definitely decided, must be fought upon quite different ground. For, when we examine the lowest phases of barbarian speech, we find, as might have been expected, that they afford no means of expressing such abstract conceptions as those just enumerated. The Aryan may call the moon a "shiner"; but in Chinese it is just the other way: the symbol for "bright" is there compounded of the symbols for "sun" and "moon." "It requires but the feeblest power of abstraction, — a power possessed even by idiots, — to use a name as the sign of a conception, e. g. to say 'sun': to say 'sheen,' as the description of a phenomenon common to all shining objects, is a higher effort; and to say 'to shine,' as expressive of the state or act, is higher still." Mr. Farrar, from whom this judicious remark is cited, has collected many striking illustrations of the paucity of abstract expressions in the lower languages. "The Society-Islanders have words for dog's tail, bird's tail, and sheep's tail, yet no word for tail; the Mohicans

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hu-mu-s is "the place where things grow." Now *homo* is compounded of *ho* + *min* (A. S. *gu-ma* in *bryd-gu-ma*, "bridegroom," Germ. *bräuti-ga-m*). The suffix *min* has just been explained in the text. *Ho* is probably akin to *hu*, *bhu*, φυ, so that the derivative *ho-min* means "he who grows." In confirmation we may cite not only the Lat. *adolescens*, but also the Goth. *thiv-a*, from *thu* (whence Eng. *thew*), Skr. *tu*, "to grow." *Thiv-a* means "a young man," he who grows or waxes in strength. From the same root *tu* we get Skr. *tavas*, "strong," Gr. ταῦς, "great" (in Hesychius); the Umbrian *tuta*, "city"; and the following words for "people," — Lettish *tauta*, Irish *tuath*, Goth. *thiuda*, O. H. G. *diot* (whence *diutisk* and *Deutsch*).

have verbs for every kind of cutting, and yet no verb 'to cut.' The Australians have no generic term for fish, bird, or tree. The Malays have no term for tree or herb, yet they have words for fibre, root, tree-crown, stalk, stock, trunk, twig, and shoot. Some American tongues have separate verbs for 'I wish to eat meat,' and 'I wish to eat soup,' but no verb for 'I wish'; and separate words for a blow with a sharp and a blow with a blunt instrument, but no abstract word for blow." * The Kafir expresses "to live" by *ukudhla ubomi*, "to eat life." In Kachari the regular passive is formed by an auxiliary, meaning "to eat." From *bu*, "strike," and *ja*, "eat," we have *ang-bu-ja-dang*, "I eat a beating, = "I am struck." This idiom is found also in Canarese, and in the tertiary Bengali and Hindi,† which doubtless adopted it from the non-Aryan dialects by which they are so closely surrounded. With such instances before us, Mr. Farrar pertinently asks: "Who shall believe that the sun and moon and earth had not been named at all until they received names from roots meaning to shine, to measure, and to plough? or that cows and reptiles, and creeping plants, and flowing water, and clouds, made shift with being anonymous until after men possessed an indefinite number of verbs, all meaning 'to go'?" An Aryan could call his sheep τὰ πρόβατα, but the primitive language-maker had no βαίνω to fall back upon: what else could he say but *baa*? When Müller traces back the word *ugly* (which Wedgwood summarily derives from *ugh!*) to the Skr. *anh*, "to throttle": from which also come *angustus*, *anguish*, *anxious*, *awe*, Goth. *agis*, "fear," *angina* and *quinsy*, as well as various words for "serpent," — Skr. *ahi*, Gr. ἔχις, ἔχιδνα, Lat. *anguis*, O. H. G. *unc*, Icel. *eglir*, Gael. *asc*; "hedgehog," — Gr. ἐχῖνος, Germ. *igel*, A. S. *igil*, Welsh *awg*; "eel," — Gr. ἔγχελυς, Lat. *anguilla*, Gael. *easg*; "lizard," Germ. *eidechse*, A. S. *athexe*, etc.: when he has proved this, he has still to show that *anh* is not onomatopœic, before he can make a point against the Bow-wow Theory. And a better combination of letters than *anh*, to express the sound of choking or throttling, it would perhaps be

* Condensed from Farrar, Chapters on Language, 199, 200.

† Müller compares the vulgar German *Prügel kosten*, "to taste blows." Cf. also *Prügelsuppe* = a mess of blows. ["Er muss es ausfressen," lit. "he must eat it out," or "up," = "he must suffer it," "bear it," "endure the infliction," or, "assume the responsibility."]

hard to find; if, indeed, this root be not the same as the interjectional *ach*, whose derivatives we have already enumerated. Admitting this kinship, we have words for "horse," and for "serpent," from onomatopœic roots, although in neither case is there an imitation of neighing or hissing. In similar wise, the Skr. *marjara*, "cat," has not, as has been claimed, any connection with the sound of purring. It means "the creature that cleans itself" (ὀμόργνυμι), but it comes ultimately from the very root *mar*, "rubbing," which we have above noticed, and which is in all probability onomatopœic. So the word *dog* is not an imitation of a growl; but its parent word *dak*, "to bite," well represents the sharp sound produced by forcibly shutting the teeth.

We are therefore strongly inclined to accept, to a large extent, the Bow-wow Theory. It makes no appeal to a hypothetical word-making faculty, possessed by primitive men, but now forever lost. It supposes that the forces concerned in evolving language have been, like other forces, essentially uniform in their operation. Like the theories of Lyell in geology and of Darwin in biology, it seeks to interpret past events after the analogy of present events. And it is known that, through all the traceable stages of linguistic growth, absolutely new words are almost exclusively onomatopœic.*

Indeed, since language is at bottom but a representation, since a word is nothing if it is not a sign, what title could a primeval name, unfavored by traditional acceptance, have, to be considered as the representation of an object, unless it were associated with it by some manifest likeness? We know that written language had an imitative origin.† We know that our Roman characters have been gradually metamorphosed from crude pictures of natural objects. If a man wished to describe a dog to the eye, he drew an outline of him; that is to say, he made a representation which affected the eye in somewhat the same way that the dog affected it. It is rational to suppose that

* Whitney, op. cit. p. 429. "Es wird vielmehr bewiesen, dass bestimmte Naturlaute neben bestimmten Naturgesetzen die einzigen äussern Factoren sind, die für den Ursprung der Sprache in Betracht kommen und das dunkle Räthsel lösen können." Voigtmann, *Die Bau-wau-Theorie*, p. v.

† This portion of the argument has been admirably treated by Mr. Farrar (Chapters on Language, Ch. XVIII.).

he would go to work after the same fashion in addressing the ear. In representing the dog by means of the voice, what could he find to represent, if not the sound of the dog? These two, — the voice of the man and the noise made by the dog, — are the only terms between which a relation of likeness could be established.

Nevertheless there is a class of primitive words, most prolific in derivatives and most ubiquitous in their functions, which, I believe, the Bow-wow Theory is inadequate to account for. Such are the fundamental, demonstrative, or prepositional roots from which have originated the simple numerals, many pronouns,* words like *aya* above discussed,† and a host of nouns and verbs. In one of his profoundest essays, Garnett has shown that the preposition which appears in Armorican as *gwar*, in Sanskrit as *vri*, etc., with the meaning "upon" or "over," has produced an enormous number of words, signifying shade, covering, enclosure, choosing, color, deflection, turf, dress, dwelling, a summit, a gate, wool, warning, forbidding, defending, watching, expecting, enduring, hiding, seeing, weariness, truth, crookedness, wickedness, a bow, a yoke, a wreath, a foundation, dregs, and a vassal. And this is but a trifling part of the list. Benfey, in his "Lexicon of Greek Roots," has traced over a thousand words, in Greek alone, to this source. Now, as Garnett says, it is difficult to establish a relation of likeness between the ejaculation of a sound and the idea of direction or position. (Essays, p. 230, fol'g.)

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* "I thought it possible, in my History of Sanskrit Literature, p. 21, to connect *ah-am* with Skr. *âha*, 'I said,' Gr. ἦ, Lat. *ajo* and *nego*, — nay, with Goth. *ahma*, 'spirit'; but I do so no longer. Nor do I accept the opinion of Benfey (*Sanskrit-Grammatik*, § 773), who derives *aham* from the pronominal root *gha* with a prosthetic *a*. It is a word which for the present must remain without a genealogy." Müller, Lectures, II. 366. Garnett's opinion seems preferable, "that the terminating *m*, which appears in all the oblique cases, is the real root; and that *aha* is a particle prefixed for the sake of emphasis, perhaps related to *iha*, 'here,' — nearly analogous to the Italian *eccomi*." (Essays, p. 99.) In verb-endings of the first person, as *bhavâ-mi*, *abhava-m*, *bhaveya-m*, etc., the demonstrative root *m* indicates proximity to the speaker; and, by composition with the equivalent *aha*, the reduplicated expression of "hereness" becomes sufficiently emphatic to serve by itself as a sign of subjectivity, "Ichheit" or "I-hood." Cf. Lat. *ego-met*, and see Don. *Crat.*, p. 250; Renan, *Lang. Sémit.* I. 464, note 2.

† In like manner, the accusative-sign δε, and δύο, *two*, *too*, *to*, and *dha*, θη, *do*, are probably from the same demonstrative root.

I believe these words to have been originally the accidental accompaniments of vague endeavors to communicate thought by gesticulation. Mr. Tylor, in his "Early History of Mankind," has illustrated the extent to which gesture accompanies, and even usurps the place of, articulate speech among savage races. In savage America, where the multiplicity of dialects was so great as to prevent oral intercourse over an extensive tract of country, the Indian tribes could communicate, by means of gesture, from Hudson's Bay to the Gulf of Mexico. Mr. Tylor cites several noteworthy instances of nascent languages among the Puris, Arapahos, and Tasmanians, where gesture is needed to supply the deficiencies of articulate sound, and where it is stated, though perhaps on insufficient evidence, that communication of ideas *in the dark* is nearly impossible. (Early Hist. p. 77.) So variously expressive are gestures, that they have been classified, like roots, as predicative and demonstrative; so far from arbitrary is their use, that a deaf-mute and a savage can ordinarily understand each other without difficulty; and it is not improbable that a language of manual signs may have preceded and ushered in the language of articulate words. (Cf. Marsh, I. 32; Whitney, 422, 431.) It is obvious that vocal utterances casually occurring simultaneously with acts of pointing, or other pantomime, would in time serve alone as substitutes for the gestures with which they had become associated; and we doubt if the origin of demonstrative roots — many of which are even now equivalent to gestures — can be in any other way accounted for.

This principle may also be extended to the case of predicative roots, expressive of non-sonorous objects, or of sensations unaccompanied by definite emotional states. Grass might have been named from its rustling, boughs from their creaking, flame from its crackling; but it is difficult to see what uniform principle could have guided men in the first choice of names for day and night, hot and cold, ground, fruit, etc. Nevertheless, a name once applied, however casually, would be almost sure to be repeated and to gain a certain degree of currency. One of my children, on first seeing an apple, pointed at it, with the exclamation, *Púttaba!* a name which she afterwards persisted in applying to apples, and ultimately extended to lemons,

oranges, and pears, so that in time it would doubtless have become a generic name for fruit. Now if the chance expressions of a child, in civilized society, may obtain temporary currency within a limited range, far more likely was this to have been the case with the casual ejaculations of the primitive language-maker. Thousands of words might arise, like this *puttaba*, for which it would be impossible to assign any adequate reason. Accidental we call them, only because the circumstances which determine the production of one sound rather than another lie beyond the reach of our present means of investigation. Mr. Tylor has shown (Fortnightly Review, Vol. IV. p. 549) that the character of the emitted sound will, to a certain extent, depend upon the expression of the face at the moment of utterance, since the play of expression alters the contour of the vocal cavity. This opens a very deep vein of inquiry, but it is one which must be worked by the physiologist. We have here reached an ultimate stratum where neither Grimm's Law nor any other implement of philological research can help us; and here we may be content for the present to let the inquiry rest.

JOHN FISKE.

ART. II. — 1. *Essay on Language, and other Papers.* By ROWLAND G. HAZARD. Edited by E. P. PEABODY. Boston: Phillips, Sampson, & Co. 1857.

2. *Our Resources.* New York: Charles Scribner & Co. 1868.

3. *Finance and Hours of Labor.* New York: Charles Scribner & Co. 1868.

4. *Freedom of Mind in Willing; or, Every Being that wills, a Creative First Cause.* New York: D. Appleton & Co. 1864.

5. *Two Letters, on Causation, and Freedom in Willing, addressed to John Stuart Mill. With an Appendix on the Existence of Matter, and our Notions of Infinite Space.* By ROWLAND G. HAZARD. Boston: Lee and Shepard. 1869.

THE foregoing list comprises the most important productions of an American author who, without the advantage of a college

training, and engaged from early life in an extensive manufacturing and mercantile business, which has allowed but limited opportunities for reading, has nevertheless written with extraordinary ability upon the grave and often perplexing problems of economical and metaphysical science. Of the earliest of his published writings, the "Essay on Language," Channing thus speaks in his lecture on Self-Culture: "I have known a man of vigorous intellect, who had enjoyed few advantages of early education, and whose mind was almost engrossed by the details of an extensive business, who composed a book, of much original thought, in steamboats and on horseback, while visiting distant customers." His later writings, on topics of finance and philosophy, have elicited strong expressions of appreciation and respect from one of the most distinguished of living authors in the same departments of inquiry,—John Stuart Mill. That Mr. Hazard, under such disadvantages, should be able to take hold of the questions which he has handled, with so clear an understanding of their nature and their present aspects, shows how much may be caught up from the atmosphere of thought that surrounds us. Yet these discussions would have been impossible, had not the author, besides this quickness of observation, been endowed by nature with philosophical talents of a very high order. A singular delicacy of analysis is combined with a strong grasp of the main points at issue, and a striking originality both in argument and illustration. A predilection for mathematics and mathematical reasoning is frequently manifest; but this does not exclude an equal sympathy with the higher forms of literature. We propose in the following pages to give some account of the various writings of Mr. Hazard, and to couple with it occasional criticisms upon their contents.

What Mr. Hazard has written upon the subject of Political Economy has been in the form of newspaper essays or tracts for the times, having reference to special topics of immediate practical importance. But these essays discover a profound comprehension of the principles of the science, and uncommon skill in the elucidation of them. It is a significant fact that, though engaged, as we have said, from early life in business as a manufacturer, Mr. Hazard, without reading Adam Smith or

any of the other writers in this province of knowledge, but simply through his own reflections, is an anti-protectionist. We advert to this circumstance, not as affording evidence of the truth or falsehood of either position in this controversy, but merely with reference to the observation, which is frequently heard, that the advocates of free-trade are inexperienced, unpractical theorists. They are stigmatized in the leading journals, which defend the protectionist policy, as professors, schoolmasters, and speculatists. This argument — more a sneer than an argument — appeals to a vulgar, unfounded prejudice, which holds in low esteem abstract reasoning and philosophical thought respecting matters of practical concern. It comes with ill grace from those who have been contending for years, on grounds of abstract morality and political justice, against the institution of slavery, the champions of which were always ready with their imposing array of facts and figures. Whether a practical familiarity with business gives special value to a man's opinions on financial questions, depends wholly on the powers of analysis and generalization which he carries with him into practical affairs, and which alone enable him to turn his experience to profitable account as regards the advancement of science.

"Our Resources" is a collection of articles published by Mr. Hazard during our late war. Early in the struggle there was great apprehension that, with the destruction of our foreign credit, our resources would prove inadequate to the emergency. These essays were designed to establish the faith of the public, here and abroad, in the sufficiency of our means. They originally appeared in the newspapers, but were collected into a pamphlet, which passed through repeated editions in this country and England. Abbreviated translations of them were also circulated on the Continent. They showed that the *spare* income of the nation prior to the war was $1,000,000,000 (gold value), and that from the stimulus imparted to labor by the war itself, and from the improvement in agricultural machinery, there was no reason to fear a diminution of this surplus; further, that from the standard of living prevalent among all classes in this country, $500,000,000 might be saved without stretching economy to a point involving any real hardship. They showed, also, that,

while the great expenditures in the war, the prostration of the credit of individuals and of banks, and the withdrawing of coin, required a considerable emission of paper-currency, yet any expansion beyond the limit of this requirement would increase the cost of the war, and enhance the debt to be subsequently paid in gold, with no counterbalancing advantages, since the increase in the volume of paper-money would add nothing to its aggregate value or purchasing power. The warning which was given in these able papers it would have been well to heed. One of the essays, entitled "Compensation to Slaveholders," undertakes to demonstrate that the value of land alone in a free State is equal to the combined value of land and of the slaves required to cultivate it in a slave State. This argument yields a picture full of encouragement to the South, since facts already indicate that it will be verified by the practical test.

The last article of this series appeared at a very critical epoch in the financial affairs of the country. The treasury was depleted; gold was at 280; money was scarce, and the bonds of the government unsalable. The incoming Secretary of the Treasury was advised in advance by bankers and financiers that his only resource was to issue more currency, that there might be a plentiful supply of money wherewith to buy the bonds. Mr. Hazard in this paper asserted — what in the light of subsequent experience is now obvious — that the course recommended to the Secretary would lead directly and speedily to national bankruptcy, and that it would, if adopted, produce a depreciation of the currency which it would be impossible to arrest, and that our financial fate would be the same as that which befell the Southern Confederacy. This article of Mr. Hazard was entitled "Expansion and Contraction." It explained how the effect of expansion must be to make money scarce and prevent the sale of the bonds; while the policy of contraction, if avowed, and adhered to, would restore confidence, and release money from the uses of trade and the appliances of speculation, to be invested in government securities. The proposition was generally regarded as preposterous, but the arguments by which it was supported were found, on examination, convincing, and the doctrines of this brief essay are among the recognized truths of political economy. The Secretary of the Treasury was fortu

nately convinced that these positions were well taken; and if the policy of contraction, which the author advised, was not pursued, no further expansion was attempted. The public are not generally aware how near we were, at that time, to measures which would have inevitably brought upon us financial ruin.

The second series of Mr. Hazard's financial papers bears the title, "Finance and Hours of Labor." The special topics are, "Finance," "Hours of Labor," "Payment of the Five-Twenty Bonds," "Inflated Currency," "How to resume Specie Payments," "Reconstruction — Freedmen's Bureau." The impolitic as well as iniquitous character of all schemes of repudiating the national debt is impressively proved. One of the capital merits of these essays is the proof which they present, as to the peculiar evils, both of repudiation and of an inflated currency, to farmers and laborers, the classes whom demagogues especially endeavor to mislead on this point. Another excellence is in the unanswerable reasoning by which the fallacious nature of all devices for resuming specie payments without diminishing the volume of the currency is demonstrated. In the course of a reply to an advocate of one of these plausible, but mistaken plans, Mr. Hazard observes: "His whole argument still ignores the fact that the purchasing power of the whole volume of currency cannot be increased by increasing its quantity; that if you double or tenfold it, double or tenfold the amount will be required to pay for the same quantity of labor or property. With the recognition of this, his whole fabric crumbles" — and, Mr. Hazard might have added, many like fabrics of modern alchemists, who by some legerdemain would transmute paper into gold.

The earliest of Mr. Hazard's published writings is the "Essay on Language," which stands first in the collection of his briefer literary and philosophical discussions. In that essay he attempts to define the essential characteristics of the language of poetry. It is not easy to give a definition, at once accurate and comprehensive, of poetry; as the fate of many past experiments evinces. Even the definition given, in Molière, to Mons. Jourdain by his master, which borrows its humor from its supposed axiomatic character, is a failure, since the antithesis of poetry, according to Coleridge's well-known dictum, is not

prose, but science. Aristotle and the ancients, in styling poetry an imitative art, were not so far astray as some modern critics have charged, since under imitation they included the reproduction of experiences not actual, but made real by the living power of the imagination. Milton's epithets, — "simple, sensuous, passionate," — are a striking description of the qualities of poetry; and Lord Bacon's fine expression as to the office of poetry in "submitting the shows of things to the desires of the mind," has had its just applause. If we add the suggestions of Coleridge and Wordsworth, as, that poetry always springs from an excited state of the faculties, that a poem uniformly has pleasure for its immediate end, and that to this pleasure not the whole alone, but each of its constituent parts also, must minister, we advance still farther towards a solution of the problem. Mr. Hazard begins by calling attention to the fact that thought and language are not inseparable. There is an incipient stage of our thoughts when they are not connected with words. Thoughts, as long as they are in this stage, he designates primitive perceptions. Words are the signs of thought, and the instruments of communicating it. We may, as far as practicable, dismiss the ideals or primitive perceptions, and, directing our attention exclusively to terms, by means of them carry forward intellectual processes. Mathematical analysis affords the purest example of this use of the *language of abstraction*. This is the characteristic language of unpoetic composition; it is the language of science. On the other hand, our attention may be fastened directly on the ideals or primitive perceptions, and their relations to one another; and this is a poetic mode of mind. These relations are not examined through substituted terms, but immediately. Moreover, "poetry, depending on this prominence of the primitive perceptions, must present, or at least use for illustration, such as we perceive clearly or feel strongly; and hence its intimate and essential connection with imagery and with passion." Language does not stand as the conventional equivalent for thought, and substitute for it. The thoughts and emotions which the language of poetry excites are its *effect*. The poet uses language "to induce an ideal," and avails himself of the association between the ideals themselves. "With a cabalistic

word he summons the half-recognized ghosts of departed feelings, and with the incantation of terms invokes a host of spirits from the world of fancy. And though we do not recollect the words, and cannot repeat the terms in that order which alone gives them magic power, yet the spectral or fairy forms, the impressions, the emotions, in short, the ideals they created, may be as distinctly retained as the remembrance of any external object which we have seen without learning its name." Thus poetry can reach beyond the limits of precise terms, and by its wondrous art reach to remote ideals, beyond such as are within the immediate grasp of words. The modes of abstraction and of ideality are thus directly opposed to one another. Between them lies the intermediate language of narration; but with narration ideality may blend, when the language of prose becomes interfused with the spirit and diction of poetry. Ideality mingles with abstraction in all effective oratory. Ideality is the life of eloquence. Abstraction may persuade, but it is ideality that inspires conviction. "It warms the heart and gives an impulse like that which arises from the realities which it depicts, for it makes them present to our mind's sight, and corresponding effects are produced upon us." Ideality impresses the mind of the auditor, without any conscious effort on his part; wholly without the labor requisite to follow a process of reasoning.

Having set forth the distinction between ideality and abstraction, the essay deduces an interesting train of reflections. One of the topics is the language of futurity. It is suggested that the future life may introduce a method of communion between mind and mind, which dispenses with words and signs, — a consummation of which the magic influence of poetry, as a revealer of thought, seems prophetic. In that case, thought will be communicated without any medium "to distort its meaning or sully its brightness." The power of music in awakening emotion is even more subtle and inexplicable than that of poetry, with which it is intimately allied. The effect of music is a series of excitements, "an induced activity to which the soul is wrought without any conscious effort of its own." But we may suppose music divested of sounds. The composer of music must have the emotions independently of the sounds,

as the poet creates his ideals independently of the terms. It is conceivable, then, that these emotions should be immediately imparted to the mind, without the necessity of the sounds by which they are evoked; and this may be the fact in another state of being. By a very delicate and penetrating analysis, the author discovers the secret bond that unites poetry, love, music, and devotion. In a fine and elevated strain, he explains the influence of ideality on character. The brief passages which follow will afford an idea of the style in which the discussion is carried forward: —

"In the formation of character, ideality exerts an influence of the highest importance. It is the channel by which the conceivable objects of desire or aversion are brought nearest to the springs of voluntary action. From those supposable events which are continually flowing through the mind, we form rules of conduct, or receive impressions, which imperceptibly govern us in the concerns of real life. It is in meditation that we nurture those innate feelings which give impulse to action, and determine its mode. He who accustoms himself to this discipline, who withdraws from the bustle of the world, and in tranquillity contemplates imaginary cases, and determines how he ought to act under them, frames for himself a system of government with less liability to error than he can do in the tumultuous scenes of active life."

"That we can modify our dispositions, is perhaps sufficiently obvious, though too often overlooked in its practical application. The great means by which these modifications are effected, we believe to be processes of ideality, and the principal causes of the wrong formation of character are, the perversion of these processes to foster ignoble passions, and the want of their influence in counteracting the effects of external causes. Fortunately, the occasions of life which have a tendency to warp the disposition, though frequent, have their intervals, are transient, and in some degree neutralize each other. The forms of ideality may always be brought to mind, and, if we encourage the presence of those only which are pure and elevated, we shall, as a consequence, become more and more refined and ennobled. Without this countervailing principle, our moral nature would be the sport of chance, liable to be irretrievably driven from its course by every current of feeling and every storm of passion. Character would then depend on accidental and physical causes."

"We have already spoken of the power of ideality in enabling us to fall into the same channels of thought which our acquaintances would pursue. If we mistake not, this is particularly obvious in the application

of it which we are now considering. How often, when we have determined on a course of conduct, particularly when that determination is formed under the influence of exciting circumstances, are we led to suspect the propriety of it, by thinking how some friend would view it! We put ourselves in his position, look at it calmly as he would do, endeavor to get the same aspect as would be presented to him, and then perhaps discover that our own vision had been distorted, and led us into error. In this way, through the medium of this faculty, we make the virtue and discretion of our friends available to us. We use their modes of thought to mould our own."

Psychological observations on the subject of inspiration and prophecy, which throw light on religious phenomena generally considered inexplicable, form one of the most interesting features of the essay. The two leading functions of the mind, the intuitive and the abstractive, the poetic and the scientific, are considered in their fundamental character, their separate agencies, and mutual relations. We subjoin a few paragraphs as additional illustrations of the character of the discussion: —

"We need not urge that this power of ideality, by which we revive the past, brighten the present, and anticipate the future, is the highest endowment of humanity. It is also that attribute of the finite spirit which most nearly corresponds to that of omnipresence in the infinite. By the exercise of this faculty, every place and every object of its knowledge is made present to the mind; and, if it be not equally proper to say that mind is present to them, this power furnishes an equivalent, which in effect makes mind not omnipresent because, and only because, it is not omniscient and omnipotent. For, if we knew all things, we could make them all present to us in the form of ideals; and, if there were no limit to this power, we could embrace them all at once; and this would be equivalent to being everywhere present at the same time; or, if we may so express it, mind, as manifested in man, has a *finite presence*, which has the same relation to *omnipresence* which its finite knowledge and power have to the other two great attributes of the universal intelligence."

"To elicit the emotions in a happy manner requires a knowledge, not only of the niceties of language, but of the intricate and delicate relations of the feelings, united to a discriminating taste, which neither perplexes by obscurity, nor wearies attention by prolixity, nor offends the vanity by being too minute. The poet must frequently give only the prominent ideals, and leave the imagination to supply the rest. The reader will thus have his faculties more excited, and fill up the blanks in a

manner most agreeable to himself; and, revelling in what thus seem the creations of his own fancy, he will cheerfully award the meed of praise to that which has provoked him to thought, and imparted to him the elevation of conscious power. We may here remark that a little obscurity in expression, or ambiguity in terms, when so employed as to concentrate rather than distract attention, may greatly assist this effect, and, at the same time, repel the attention from the terms to the ideals, to which they allow a greater latitude, but may still, in some measure, control."

"Although the poetic and prosaic modes of mind are seldom found united in their highest perfection in the same individual, yet every aspect of the subject indicates that it is by a combination of them that the greatest intellectual power is produced. It is then the union of activity and strength, — the beauty of poetry mingling its vivacity and softness with the sterner and stronger attributes of reason. So necessary does this combination appear, in order to give efficiency to talent, that we think we should hazard little in asserting that every great enterprise in philosophy had been accomplished by a powerful imagination, controlled and directed by yet more powerful reasoning faculties; and that every grand achievement in poetry had been effected by strong reasoning powers, sustaining and impelling a yet more vigorous imagination. In great minds it is not the absence of either endowment, but only the *predominance* of the reasoning or ideal faculty, which forms the distinction, and determines the character to the one or the other class."

The maturest and most elaborate of the writings of Mr. Hazard is his work on the Will. It was undertaken partly in deference to a request of Channing, who, like many others, appears to have been of Dr. Johnson's mind, that "all theory is against the freedom of the will, all experience in favor of it." Remarks of Mr. Hazard on this subject, especially in reference to Edwards's argument, so impressed Channing, that he urged the preparation of a book in answer to that famous treatise. The work which Channing desired to be written did not see the light until long after the suggestion was made. It was published in 1864. After a brief Preface, which vindicates the dignity and importance of metaphysical studies, the author enters upon an exposition and defence of his system. We proceed to give a summary view of its leading features.

To mind, Mr. Hazard affirms, causal agency pre-eminently, if not exclusively, belongs. Of the existence of matter as a dis-

tinct entity there is no decisive proof. The sensations of which we are conscious, and on which a belief in matter is founded, may be the ideas of God directly imparted to us, the "laws of nature" being a synonyme for the uniform action of the Supreme Intelligence. But, granting the objective reality of matter, we must find all its causal agency in its motion. Its motion has been eternal, or it has been communicated to it from without. It is demonstrable that the causal power exerted in motion would tend to exhaust itself. Hence, if motion has been from eternity, this power is reduced to an infinitesimal. If it commenced with its present conditions, therefore, the interference of an intelligent cause must have been requisite, to sustain any appreciable power in matter as cause. If it commenced with other conditions, a like interference was required to change them to the conditions which now exist. So that the present influence of matter, by means of motion, must result from the action of intelligence. Mind, on the contrary, is possessed of an original, causal agency. Its sensations and emotions are not subject to will. Neither is its knowledge; although by will we can produce the conditions favorable to the acquisition of knowledge. The mind has but one real faculty, or power, to do anything, and this faculty is the *will*. Through this faculty the mind puts forth effort. The object of every act of will is to produce some effect in the future. Its immediate object is to influence mental activity, or to move the body.

Here, then, in the will, is the fountain, and the sole fountain, of the mind's causal agency. And what is liberty? It is the opposite of compulsion, constraint, coercion. The freedom of the will is an expression of the fact that the mind controls its own action, exempt from all constraint. Self-determination is the essence of freedom. Here is a cause which is not moved to act by anything else, but is self-moved. It is true that there are conditions precedent, without which its action is insupposable. These conditions are *want* and *knowledge*. There must be some want of which the mind is sensible, and a preconception of a way or ways in which this want may be satisfied. Without this prophetic power volition would be impossible. But neither the want nor the knowledge, which are the conditions of volition, are endued with efficiency. They are only

occasional causes. It is true that volition does not always follow immediately on the consciousness of a want and the knowledge of the means of supplying it. The mind may deliberate as to whether it will gratify its want, or which of various conflicting wants it will gratify, or what course, out of several which may be open, it will adopt for the purpose of attaining the end. But deliberation is voluntary, and is initiated by an act of will. Whether the mind will seek for more knowledge, prior to putting forth the act of volition, and how much time it will spend in this process of consideration, it is for the will, or the mind willing, to determine. The determination or decision, however, which is termed *choice*, is not an act of will, but purely a perception, — an act of the knowing capacity. This is a prominent feature of Mr. Hazard's system. Having thus attained to the requisite knowledge as to what its want is, and what is the best method of ministering to it, the mind freely puts forth its activity in the form of volition. The will is strictly a creative power, and the mind of man has just the same power in kind as belongs to God. Aside from the act of giving existence to matter, of which we can form no conception, and of which there exists no proof, the creative power of Deity is possessed, though in vastly less measure, by his rational creatures. The knowledge of man is limited, and thus the sphere in which his will can be exercised is proportionately restricted. But the human mind, like the divine, is influenced by its preconceptions of its own effects; it is drawn forward, so to speak, by the future, and thus is truly a first cause.

Matter, being unintelligent and without will, must be controlled in its changes by a power without itself. At least, it has no power to vary the effects of its own motion, on the supposition that motion originally belongs to it. In order to the existence of will, there must be at least one want, with a knowledge of at least one way of supplying it. In the case of instinctive action this knowledge is intuitive. It is furnished to the being without his own action. Hence the element of deliberation is absent. Rational actions are according to a plan which the being who performs them has contrived. Habitual action is the action of a finite, intelligent being, in conformity to a plan of its own, with which practice has made it

so familiar that each successive step is taken without the need of examination. Hence habit is called second nature. The voluntary action of human beings is first instinctive. The basis of it is our innate wants and intuitive knowledge.

Man is capable of modifying his wants by increasing his knowledge. Hence his sentiments are largely, though indirectly, under his control. The knowledge of each individual as to what is morally right is for him infallible. He is responsible only for failing to put forth the efforts which are conformed to his knowledge or sense of right. The persevering effort to be noble and good is, itself, being noble and good. The effort, if it be real, is here the consummation.

Mr. Hazard's system is brought out more fully in the second part of his treatise, which comprises his Review of Edwards. The phraseology of Edwards in defining the will is subjected to a searching criticism. Especially is the propriety of his identification of choice and volition disputed. That Edwards involves himself in ambiguity and inconsistency by making choice, which with him is a synonyme of volition, equivalent to "being pleased, or displeased" with a thing, while in other places the latter state of mind is made the antecedent and ground of the choice, is clearly set forth. The definition of liberty which is given by Edwards is simply a definition of external liberty. He assumes a necessity of connection between the acts of the will and "such moral causes as the strength of inclination, or motive." This inclination may be so strong in one direction, says Edwards, that it is impossible to surmount it. But "inclination" and "bias" are, by his definition, previous choices. His argument for moral necessity generally goes no farther than to prove the incompatibility of two opposite choices at the same time. But if his idea be that the mind cannot overcome its own strong inclination, then, according to Mr. Hazard, this fact, being due to the absence of want or the presence of a conflicting want, is not inconsistent with freedom. The inability to will when or what a man does not want to will, is not opposed to liberty. Edwards's favorite method of confuting his opponents, the advocates of self-determination, is the *reductio ad absurdum*. To their assertion that "one can choose otherwise than he actually chooses, if he will," it is replied, that, as "will"

and "choose" are equivalent terms, their proposition implies that a choice is itself chosen, which leads to an infinite series. But it is one thing to say that "the will determines its own acts *by* choosing its own acts," and quite another thing to say that "the will determines its own acts *in* the exercise of a power of willing and choosing." Edwards confounds the two statements; whereas the latter does not of necessity imply the absurdity of choosing choices, but merely identifies the act of self-determination with the act of choosing. They are one and the same.

The main arguments of Edwards for the doctrine of necessity are found in the application of the maxim, no event without a cause, to the phenomena of the will. Why, in any given case, did the mind choose as it did, and not otherwise? It is not sufficient, says Edwards, to attribute this event to the power of choice, or to the general activity of the mind. What we have to account for is, the specification of the choice, — the choice of one thing *rather* than another. But Edwards solves the problem himself, by one of the modes in which he states it. "Active nature," he says, "is a general thing; it is an ability, or tendency, of nature, to action generally taken, which may be a cause why the soul acts as occasion or reason is given." In regard to this sentence, Mr. Hazard observes: "He virtually admits all that is essential to my system; i. e. that the soul has an ability to action, which it may use when it sees a reason, and that its effort, or act of will, is but an exercise of this *general ability* or power of action, which it directs or determines to some *particular* act by means of its knowledge." The activity of the soul in willing is not prior to the act of willing, but is identical with it. The mind determines and controls itself in the act of will, and is not determined by any power extrinsic to itself: this is its freedom. "If, to the question proposed by Edwards, 'why the soul of man uses its activity as it does,' it should be replied, that intelligence, from its very nature, has a faculty to determine, or to direct its activity, it would be in conformity to his own previous statements, that the mind has a faculty by which it wills, and that an act of volition is a determination of the mind." The whole question really is whether an absolute

cause, — a cause not necessitated to act as it does, but self-moving and self-directed, — is conceivable. Mr. Hazard presents a very ingenious refutation of the argument for necessity derived from the alleged uniformity in the action of the will under like circumstances. Supposing that such a uniformity exists, — that is to say, that the will in the same circumstances will always act in the same way, — there is no warrant for the inference that its action is necessary. The mind may *freely* direct its voluntary action with uniformity, and this uniformity is just as explicable by referring it to liberty as to necessity. For example, if I go from my dwelling to the post-office every day in the year, and each time take a direct and easy way, instead of a circuitous and difficult one, this last circumstance affords no proof that I do not elect the path with perfect freedom. There is no more evidence of necessity, from the uniformity of my action, than if I were occasionally to break up this uniformity by taking the other way. Mr. Hazard denies the truth of the proposition that the same causes in the same circumstances necessarily produce the same effects. If we understand him, he even questions the fact of such a uniformity in voluntary actions as forms the basis of this doctrine. He holds that where there is a reason for selecting one of several objects, but no reason or motive for selecting one of them rather than another, the mind still can put forth its voluntary effort and take one arbitrarily, or frame to itself a perfectly arbitrary rule for the regulation of its action.

One of Edwards's proofs of necessity is drawn from the fact of the foreknowledge of God. Actions which are not determined by antecedent causes, he argues, cannot be foreknown or predicted. The divine government over the world, he contends, would be overthrown on the theory which he opposes. Mr. Hazard meets this argument by admitting that foreknowledge is inseparable from predetermination; but he rejects the inference, holding that foreknowledge is not necessary to the divine administration. The Deity, in the very fact of giving existence to free agents, foregoes the prescience of their voluntary actions; but such are his resources of knowledge and power, that he knows all the possible exertions of free agency on the

part of his creatures, and, as these exertions occur, he can adapt his action accordingly. In short, Mr. Hazard denies that foreknowledge — beyond the foreknowledge of all that is possible — is needful to the conduct of the divine administration and to the realization of the benevolent purposes of God. It is the same ground that was taken by some of the older Socinian theologians. We differ from Mr. Hazard on this point. It cannot be proved that the infallible foreknowledge of free actions is a contradiction. To say that an event infallibly foreknown "must happen," is ambiguous. There is a logical necessity, indeed, that it should be, but no real necessity, for the plain reason that foreknowledge is not a cause. If we remember an event, it *must* have occurred; but this is not to say that it was a necessitated event. Moreover, nothing is gained to the argument for freedom by the denial of foreknowledge, since every actual event, and thus every free act, was antecedently certain to occur. There is an antecedent certainty, and nothing is lost by allowing that this was known to an intelligent being. If to-day I freely will to make a certain journey, or to give a sum of money to a certain poor man, it was a true proposition yesterday, and from all eternity, that I should to-day thus will. It was a true proposition, whether any being was cognizant of the truth or not. There is nothing to militate against freedom, in foreknowledge, that does not inhere equally in this antecedent certainty which we intuitively see to exist. In truth, there is nothing in either, in themselves considered, that at all affects the question of liberty or necessity.

Mr. Hazard's correspondence with Mr. Mill relates principally to the subject of causation. With Mr. Mill, cause signifies only the assemblage of antecedents which some event invariably follows. Causal agency, or the exertion of power, in the usual sense of the term, is eliminated, as being something of the existence of which we have no proof. It follows that the distinction of efficient and occasional causes disappears, since efficiency itself has no real existence. Mr. Mill disowns the doctrine of necessity, since this word presupposes a causal agency, which his system does not admit. But he contends for the same invariable sequence in the phenomena of the will as prevails in the operations of material nature. That is to say,

the same mind in the same circumstances always wills in the same way. Respecting the origin of the notion of causation, which Mr. Hazard, with many other philosophers, attributes to our conscious voluntary efforts, producing muscular exertion, Mr. Mill brings forward the argument of Sir William Hamilton, that this cannot be the case, since between the volition, and the motion of the arm, or any other member, there intervene links of cause and effect of which the mind, in the act of will, can have no cognizance. In reply, Mr. Hazard denies that such a cognizance of the intervening process is requisite, inasmuch as the knowledge that the given effect will be produced as a consequence of volition is at first instinctive, and without this innate knowledge the putting forth of such volition would be inconceivable. Mr. Hazard also argues with much force against the general doctrine of Hume and Mill, that causation is identical with invariable sequence, efficiency being excluded. It is asserted that Mr. Mill's definitions seem only to indicate a mode of experimentally finding what are causes, and do not explain or define either our idea or the nature of cause. They do not discriminate between efficient causes and causes which, though necessary to the effect, have no agency in producing it; as life, for example, is the necessary condition of death. The passive agencies which resist a given change are not to be confounded with the active agency which changes them. The fact that men differ from one another in their distinction of the cause, from the mere conditions, of a phenomenon, does not prove that there is no cause, in the sense commonly assigned to the term. "If twenty men attribute a phenomenon to twenty different agencies, it is no indication that it may be properly attributed to the whole twenty agencies combined." This diversity of judgment as to what is the real cause furnishes no scientific ground for combining all the conditions, and deeming them, collectively taken, the cause. We have room for only a brief extract: —

"There must be some power producing the uniformity, the existence of which, in the flow of events, all admit. To meet this necessity of the observed facts, the last hypothesis of our category seems to have been devised. It appears to fully cover the ground intended, for it asserts that the cause inheres, not in the events themselves, but in the invariability or uniformity of their succession. But the very things to be

accounted for by the theory, are, first, the advent, addition, or succession of an event, and second, the observed uniformity in this succession. Under this hypothesis, if it be asked why one certain event succeeds another certain event, it must be replied, because it always does so; i. e. it does so on the particular occasion, because it does so on all other like occasions. And if in any case the cause of this uniformity be asked for, as, for instance, why the consequent B always succeeds the antecedent A, the answer must still be because it always does so; i. e. it always does so because it always does so, or, shorter, it does because it does. Nor will it help the matter to say it not only always has been, but we believe it always will be so. The *generic names* of the phenomena are now superseded by the phrase *always does*, both traceable to the same observed fact of uniformity, and both really making the phenomena in a collective form the causes of themselves individually.

"The idea of causative power is distinct from, and must precede, that of the uniformity of its action or its effect. The power which produces the effect may be wholly independent of any uniformity in its manifestation. It is no less cause the first time it acts, when no uniformity can have obtained; and would be no less cause if it varied its action every time it acted. The two ideas are not only not identical, but are essentially distinct and different.

"From the conclusion which I reached, that the effect is simultaneous with the action of its cause, I have already suggested the corollary, that our idea of cause is independent of, and separable from, that of succession; and if I was correct in saying that the knowledge that we can (through motion of matter or otherwise) extend the effects of any action beyond the moment of exertion is not essential to our idea of power or of cause, we may from this also infer that succession is not a necessary element in our idea of power or of cause; and this position, if tenable, takes away the whole foundation of the definitions of cause which rest upon the mere succession of consequents to antecedents invariable, inevitable, or otherwise."

Other points which are brought into this controversy on the nature of cause and the origin of our notion of cause, — as, for example, the simultaneousness of effect and cause, — we cannot here notice.

There is one department of the action of the will, which, if it be recognized in this treatise, has less than its due share of attention. There are permanent states of the will, — immanent preferences, — which are properly called principles of

action, inasmuch as they dictate a great variety of overt voluntary actions subordinate to them. In other words, the mind voluntarily sets before itself ends, and the determination of the will towards an end, when once made, may abide as a permanent state of the will, and as the spring of numberless volitions which are put forth as means for the attainment of the end thus previously chosen. Mr. Hazard has a chapter on the "Effort for Internal Change." In the course of it, he observes: "If the object of the effort, instead of external good and noble action, is the direct improvement of his own moral nature, then the persevering effort to be good and noble is, itself, being good and noble." Here the effort — that is, the action of the will — is characterized as "persevering." It is also said: "While in the external there must be something beyond the effort, — i. e. there must be that subsequent change which is the object of the effort, before the creation is consummated, — in the sphere of the moral nature the effort is itself the consummation." These sentences open a path of inquiry which this able writer has not very fully pursued. We may briefly indicate what we conceive to be the truth in the matter. That such a continuous purpose or determination of the will may exist, is a truth familiarly acknowledged. I resolve to go to London. This resolve is a determination of the will, after a consideration, we will suppose, of the reasons for and against the journey. This resolution, once formed, is not, or need not be, renewed. It remains as an abiding condition of the will; and in pursuance of it I arrange my affairs at home, engage my passage, and put forth numberless other volitions, all of which serve merely for the execution of this original and continuous purpose. We believe that we are not wrong in describing the state of mind to which we advert as a voluntary state, a state of the will. Now the mind is capable of setting before itself ends, or cherishing purposes, of a vastly more comprehensive character. This explains the possibility of habits, as well as acts, of the will. The will is not merely a faculty of volitions; it is a faculty of preferences, comprehensive, abiding, and governing in their influence, from which volitions spring. These leading purposes or principles constitute character. To follow out the suggestions of this truth

would lead us too far into the domain of theology. But it may be observed that philosophical theologians, like Augustine and Aquinas and Calvin, have considered themselves to assert in their doctrine of sin the very truth respecting the simplicity of character, which Jesus taught in the declaration, "No man can serve two masters." To live for an end is necessary for a rational, moral being; and this end is either good or evil.

The treatise of Mr. Hazard, in our judgment, assigns to knowledge an undue influence on voluntary action. We are not satisfied that what the author calls choice, — the decision how to act, — belongs to the understanding. This criticism touches one of the prominent features of the system advocated in the work. Suppose a case in which a man is engaged in a struggle with temptation. Reason and moral feeling prompt in one direction; appetite and selfish passion in another. And suppose that the will acts in conformity with the baser impulse. Can it be said that the man beforehand knows that this action is best? We are familiar with the distinction which writers make between the rational and the passionate judgment, — the conviction, on the one hand, that the virtuous action and the satisfaction attending it are best, and the vivid sense, on the other, of the attractiveness of forbidden pleasure. But the question is, does not the mind, as far as the judging-faculty is concerned, decide that the right action is best, and, all things considered, will suit it best? And does it not act in direct opposition to the decision of the understanding? In other words, does the man not know that he is acting foolishly, as well as culpably? He is, in fact, choosing an immediate gratification for one more remote and enduring, a gratification of a low species for a refined and elevated enjoyment. The motive to this unworthy act is not to be found within the sphere of the intellect or reason. If there is a more intense excitement of certain lower propensities, and if this vivid conception of the pleasure to be derived from indulging them *occasions* the wrong act of the will, still this condition of feeling is not to be confounded with an act of judgment. There is simply a choice — a choice *by the will* — of an inferior good, which the mind knows to be inferior; and for this choice no sufficient reason is to be given. If there were, the act would

not be morally wrong. We can point out the occasions, or antecedent states of feeling, which are likely to lead to, or be followed by, such an act; but here our explication must end, unless we would call evil good.

The Greek philosophers, without exception, exaggerated the influence exercised by knowledge over character. One pervading error of their systems was this one-sided intellectualism, which even identified knowledge and virtue. This is the verdict of scholars generally, and has been stated by none more explicitly, even in reference to the Socratic system, than by Mr. Grote, the historian. An increase of knowledge may tend to an increase of virtue; but it is a part of the mystery of our free and responsible nature that we can, and often do, act in direct contravention of our clearest perceptions. Ignorance may mitigate, and in some cases obliterate, guilt. "They know not what they do," is an argument for forgiveness. But it is not true that knowledge invariably produces rectitude. Rather is it true that the will and affections may, and in unrighteous action do, reject the control of intelligence.

In perusing Mr. Hazard's treatise, we have carefully looked for his opinion in regard to the power of contrary choice. Has the mind the power to choose otherwise than it actually does choose, without any change of circumstances? That this power is essential to the freedom of the will has been a prevalent opinion of philosophers. It is true that philosophical theologians in great number, — Augustinians, Thomists, Calvinists, Jansenists, — deny the existence of such a power within the sphere of strictly religious action, in the present moral condition of mankind; that is, they deny to "the fallen will" the power to reverse its own fundamental action. The will remains, — such is the doctrine, — and men sin spontaneously, and in this sense freely; but the will is not free to that which is good; on the contrary, it is a will in bondage. But the most orthodox of these theologians maintain an original power of contrary choice as an essential condition of man's first probation, and they hold to the present existence of such a power in respect to that vast category of human actions which do not fall within the distinctively religious sphere. Such a "power to the contrary" appears to be essential to moral liberty. "I

could have willed otherwise," is a bitter ingredient of remorse. In several passages Mr. Hazard seems to concede the reality of the power to the contrary. Speaking of a wrong-doer, he says (p. 166): "He must have been able to will rightly, for his knowledge, which is the only limit to this ability, embraced all that was essential to action morally right." We read also (p. 306): "God never permits such action without a monition through the moral sense, warning us to refrain from the mutilation or degradation of our being, and suggesting search of that knowledge which, by a faith in the wisdom and goodness of the Supreme Intelligence, intuitive or early acquired, we know will reconcile gratification and duty." These passages seem to imply that there was power fully adequate, in the first case, to an opposite determination of the will, and, in the second case, to another determination in the room of the one actually taking place, — another which would have resulted in an opposite one. On the other hand, there are various passages which make the connection between volition and want, or knowledge, or both, to be of such a nature that the power to an opposite act of will seems to be precluded. We read (p. 227): "The inability to will what or when he does not want to will, is not opposed to freedom. Such ideas of freedom are absurd and contradictory." The context may possibly render this passage indecisive as to the point in question. We find, however (on p. 382), the following statement: "The fallacy of the argument . . . . lies in supposing that after the mind has, by a decision or judgment, directed its volition or effort, freedom still requires that *some other* volition or effort should be possible." "If there is of *necessity* a connection between this decision and effort, this only proves that the mind is of necessity free in such effort." Now the want and the knowledge are, in the first instance, innate; and then, if we understand our author aright, a volition opposite to the one that actually occurred would have been impossible. At least, the possibility of such an opposite volition is not necessary to freedom. The mind, it is held, on the occasion of its want and knowledge, puts forth of itself its volitive energy. But is not the particular mode of voluntary action, after all, a necessary effect of the constitution of the mind? In other words, is not the mind

constrained, not *ab extra*, but by its nature, to will as it does, — its want and knowledge, which by the supposition are involuntary, being what they are? And is this freedom? Is it freedom on which moral accountableness can be founded? The admission of a power of contrary choice does not of necessity involve a denial of the uniformity of action as a fact. The author's reasonings elsewhere, where he treats of this last topic, make the truth of this statement evident. It might be supposed that room is given for the power of contrary choice, in cases where the mind deliberates for the purpose of increasing its knowledge, either as to the want which it should gratify or the best means of attaining a chosen end. But as far as acts of will enter into this process of reflection, whether in initiating it or breaking it off, they are subject to the same conditions as all other acts of will. They result from a want and from a knowledge, and take place therefore, we infer, with no more possibility of the opposite volition than exists elsewhere. Yet it might be argued that our author's positions, respecting the uniformity of action, the fact of which he questions, and respecting the power to put forth volition arbitrarily in the absence of a motive to a particular form of choice, better harmonize with the supposition that a "power to the contrary" inheres in the will.

From the most recent publication of Mr. Hazard, we find that the impression as to his views on the "power to the contrary," which we had derived from his treatise, is correct. That is to say, he does not admit its existence, and he argues that it is not requisite for freedom. "Our freedom in willing," he says (p. 133), "is evinced by our willing to do what we want to do, and it cannot be necessary to this freedom that we should be able even to try to do what we do not want to try to do." Want, according to our author, is not an act of will, — it is involuntary. If now we *cannot* will except in accordance with the want, is there freedom? Is not the act of the will a necessary result of the constitution of the willing agent, — as truly so, though in a different way, as the want itself? Is there responsibility, when we cannot avoid having the want, and cannot avoid willing in conformity with it? Mr Hazard says: —

"As against Sir William Hamilton's inferring freedom directly from consciousness, you say, 'To be conscious of free will must mean to be conscious, before I have decided, that I am able to decide either way.' I would say, that to be conscious of free will must mean to be conscious, before I have decided, that it is I that am to decide; that I am to determine my own act of will at my own pleasure, or as on examination I shall find will suit me best. The case you state, whether one will prefer to murder or not to murder, does not raise the question of freedom in willing, but only of preferring, or choosing, which, though heretofore held to be the same as willing, you agree with me is something entirely different. The willing to murder is just as free as the willing not to murder, and the only question touching the freedom of the willing is the same in either case; namely, Does the being as he is, good or bad, himself determine to make the effort to murder or not to make it? Whether he determine to make, or not to make, may indicate what his character is, but has no bearing upon the question of his freedom."

Consciousness of free will is thus identified with the consciousness that I am to put forth an act of will conformably to an intellectual act in regard to which I am not free. This intellectual act being what it is, I cannot will otherwise. Does this conception of freedom furnish an adequate ground of moral accountableness? Does not the mind, in this whole process, conform to a law of its being from which it would be impossible for it to deviate? If it be said that this determination or decision, which precedes the act of will, is itself due indirectly to prior acts of the will, the reply is, that these also can be followed back to a primary decision of the same nature. There is no break in the chain. Is it not more reasonable to regard the determination or decision, in the case supposed, as itself a voluntary act? And does it not imply a deeper, underlying, voluntary preference of something opposed to the highest good, — an immanent habit of will?

In this account of Mr. Hazard's treatise we have done less than justice to its merits. The subtile and original trains of argumentation which are pursued are hardly more remarkable than the fresh and striking illustrations by which the author's doctrines are explained and enforced. One great idea, — that the mind itself is capable of originating action, of beginning effort in the absence of all other causative power or

force, — pervades the entire discussion. This idea is set forth as the prime characteristic of freedom, and is defended against various forms of necessitarian objection with an ingenuity rarely surpassed. The admiration which the ability of Mr. Hazard's writings has excited is by no means limited to those who coincide with his philosophical opinions. The "Two Letters on Causation and Freedom in Willing," which are addressed to Mr. Mill, and which have just been given to the public in a revised form, are sufficient of themselves to entitle the author to a place in the front rank of metaphysical writers.

George P. Fisher.

Art. III. — Indian Migrations.

In this article I intend to present such evidence bearing upon the migrations of the North American Indians as may be drawn from a consideration of physical conditions, especially the influence of abundant means of subsistence; and, in a second and concluding article, such other evidence upon the same subject as may be derived from their systems of consanguinity, their relative positions, languages, and traditions, and in addition, notices of such actual migrations as are known to have occurred. A determination of the probable source of the aboriginal inhabitants of South America will be involved in the general conclusions I seek to establish.

Since the materials we now possess are insufficient for a conclusive discussion of this subject, some of the views presented will be necessarily conjectural. But as philosophical speculations precede systems of philosophy, so historical speculations often lead the way to veritable history. In the present state of our knowledge, the great movements of the American aborigines in pre-historic ages still lie within the domain of speculation. A probable hypothesis with respect to the initial point of these migrations is the utmost we may hope at present to reach.

It will be my principal object to bring together a body of facts, bearing upon these migrations, which tend to establish

their starting-point in the valley of the Columbia River, and at the outset three propositions will be assumed to be true: First, that there was a time, in the past, when North and South America were destitute of human inhabitants. Second, that at the period of the discovery of their several parts a people were found thinly scattered over their vast areas, who agreed so minutely in physical and mental characteristics, that they all received a common name, and were regarded, whether correctly or incorrectly, as a common stock. And third, that the epoch of their first occupation was of very ancient date.

With respect to the first proposition, no discussion is necessary. The second, though of limited significance, is nevertheless important. From New Mexico to Patagonia, including the West India Islands, the Spanish navigators and explorers found this singular people universally distributed, and bestowed upon them, all alike, the name of *Indians*. They observed no difference in type, but, on the contrary, abundant evidence of a common type. The English and French met the aborigines from near the confines of the Arctic Sea to New Mexico, and from the Atlantic to the Pacific, and pronounced them, without distinction, *American Indians*. This uniform testimony of the first discoverers, the general truthfulness of which has been confirmed by all subsequent observers, tends to establish one of two alternative conclusions, — either that all these aboriginal nations were of immediately common descent, or that this uniformity in physical characteristics was the result of a continuous intermingling of blood.

Upon the third proposition, it may be observed that the occupation of America by the ancestors of the present Indians extends backward to a remote age, covering a period of many thousand years. If the unity of their origin is assumed, the lapse of many ages would be requisite to break an original language into the several existing stock languages, of which there are forty, more or less, in North America alone, — the number which have perished being unknown, — and to allow these in turn to pass into the multitude of dialects which are now spoken. On the contrary, if a diverse origin is assumed, it would still require several thousand years for two or more families genetically unconnected, and occupying such immense

areas, to have intermingled so completely as to create a typical stock, such as the Indian stock has become. The hypothesis of a diverse origin would seem further to require that these families should have been restricted, for mutual accessibility, either to North or to South America, and to a limited portion of one of these areas, until the coalescence had become complete; since the inhabitants of the two continents and of the islands were entirely isolated from, and ignorant of, the existence of each other at the epoch of their discovery.

Barbarians, ignorant of agriculture and depending upon fish and game for subsistence, spread over large areas with great rapidity. Under the operation of purely physical causes, they would reach in their migrations the remotest boundaries of a continent in a much shorter time than a civilized people with all the appliances of civilization. This important and well-established fact should be kept constantly in view. A narrow sea or treeless plain might arrest their progress for centuries; but wherever their feet could carry them, with subsistence accessible upon the way, they would be certain to go, until a continent as vast as the American in both its divisions had been traversed in all its parts. Agriculture tends to localize nations and wed them to the soil, thus arresting their dispersion or confining it to contiguous areas. Abundant means of subsistence tend to the same result; but when there is a surplus population which becomes emigrant, it seeks similar areas, without much regard to distance.

Whether the ancestors of the American aborigines were first planted in North or South America remains a question.* Our

* Dr. Daniel Wilson, in his "Pre-historic Man," advances the hypothesis of a peopling of South America from the Polynesian Islands, and of North America from South America. It is with reluctance that I am compelled to dissent from the views of this eminent scholar, who has done such excellent work for American ethnology. He remarks: "From some one of the early centres of South American population planted on the Pacific coasts by Polynesian and other migrations, nursed in the neighboring valleys of the Andes in remote pre-historic times, the predominant Southern race diffused itself, or extended its influence through many ramifications. It spread northward beyond the Isthmus, expanded throughout the peninsular region of Central America, and, after occupying for a time the Mexican plateau, it overflowed along either side of the great mountain chain, reaching towards the northern latitudes of the Pacific, and extending inland to the east of the Rocky Mountains through the great valley watered by the Mississippi and its tributaries. It is not, however, to be supposed that such a hypothesis of migration implies the

knowledge of the aboriginal inhabitants of South America, except of those upon the Andes, is still very imperfect. Descriptive notices of the people, with some classification of dialects into stock languages, exist, but the aggregate of information fails to meet the requirements of systematic ethnology. The inhabitants of the Andes, who in material progress and in the importance of their position far surpassed all the other aborigines of South America, were an insulated people. This great chain, with its table-lands, mountains, valleys, lakes, and rivers, forms a continent within itself; and however satisfactory the information we possess with respect to the Village Indians of this secondary continent might be regarded, as a guide to trustworthy conclusions concerning their original derivation some knowledge of the great movements of the remaining nations would be necessary. The facts with respect to the movements and relations of the North American Indians are much better understood, and may contain sufficient evidence for a settlement of the question in favor of an original home in North America. It is with an impression of the controlling character of this evidence that I shall treat the migrations of the North American Indians independently.

At the period of their discovery the American aborigines were ignorant of the use of iron, and, consequently, of the arts which require this metal; but they had undoubtedly made great progress, as compared with their primitive state. They were found in two dissimilar conditions. First were the Roving Indians, depending for subsistence upon fish and game. Second, the Village Indians, depending chiefly upon agriculture. Between these, and connecting the extremes by insensible gradations, were the partially Roving and partially Village Indians.* The first class had developed many useful arts. They possessed the art of striking fire; of making the bow,

literal diffusion of a single people from one geographical centre." (p. 595.) Farther on he observes: "But independent of all real or hypothetical ramification from Southern or insular offsets of oceanic migration, some analogies confirm the probability of a portion of the North American stock having entered the continent from Asia by Behring's Straits or the Aleutian Islands, and more probably by the latter than the former, for it is the climate that constitutes the real barrier." (Ibid., p. 597.)

* *Vide* North American Review, April, 1869, p. 494.

with the string of sinew, and the arrow-head, both of flint and bone; of making vessels of pottery; of curing and tanning skins; of making moccasins and wearing apparel, together with various implements and utensils of stone, wood, and bone; of rope and net making from filaments of bark; of finger-weaving, with warp and woof, the same materials into sashes, burden-straps, and other useful fabrics; of basket-making with osier, cane, and splints; of canoe-making, — the skin, birch-bark, and dug-out; of constructing timber-frame lodges and skin tents; of shaping stone mauls, hammers, and chisels; of making fish-spears, nets, and bone hooks, implements for athletic games, musical instruments, such as the flute and the drum, weapons, and personal ornaments of shell, bone, and stone. They had invented the art of picture writing, and had also developed a language of signs, which became the common medium of communication between nations speaking languages mutually unintelligible. They possessed a form of government, and clearly defined domestic institutions, which served to regulate their political affairs. When the extent of their progress in these several respects is fully appreciated, the differences between them and the Village Indians will be found much less in degree than is usually supposed.

Whilst the Village Indians possessed the same arts, implements, and utensils, as well as institutions and forms of government, they had obtained native copper, had formed copper implements, and, in certain areas, implements and utensils of bronze, and had also worked native gold and silver into various forms. But a knowledge of the use of these metals was limited chiefly to the Village Indians of Mexico and Peru. Even among these, little progress had been made in the employment of them in the practical arts of life. In addition to these means of advancement, they had learned the art of cultivating the ground, which established them in villages, and thus gave them a new impulse forward. It is plain that village life, upon the stable basis of agricultural subsistence, stimulated in a remarkable manner the development of their primitive arts. A decrease in the severity of the struggle for existence, and an increase of numbers in a small area, would necessarily be favorable to this progress; which

is conspicuously shown in their architecture and stone sculptures; and, perhaps more decisively, in the Maya and Aztec calendars to measure annual time, and in the solstitial stone of the Peruvians.* Ages upon ages of experience, with vicissitudes of lapse and recovery, were required, to produce the progress they had made at the epoch of European discovery. Measured from the stand-point of their primitive condition, — could the extremity of its rudeness be known, — the progress of the Roving Indians was probably much more remarkable in degree than that of the Village Indians after the change from a roving to a stationary life. The stages of progress in the ages of barbarism were as measured and real as the stages of progress in ages of civilization. Notwithstanding their knowledge of agriculture, the Village, as well as the Roving Indians, were still in the "Age of Stone." They were found using stone implements and utensils, which had not been abandoned even among the more advanced of the former class. Agriculture, however, performed an important part in the elevation of the Indian family, although it never reached a sufficient development to give to the Village Indians the mastery of the continent, or to emancipate them from the superior power of the Roving and partially Village Indians, from whose ranks issued the migrating bands which peopled the continent. The principal nations of Village Indians in Mexico, if their traditions can be trusted, were themselves emigrants from the North but three or four centuries prior to the Spanish conquest. Natural subsistence was contending with agricultural for supremacy when European colonization commenced. It will be seen in the sequel that the former appeared to hold the mastery.

The American aborigines undoubtedly commenced their career as fishermen and hunters, but chiefly as fishermen; and the mass of them remained substantially in that condition

* In the lunar months of the Iroquois and other Northern Indians, we find an early stage of the same thought. In like manner we find in the language of signs of the Roving Indians the incipient forms out of which sprung, probably, the picture writings of the Aztecs, and ultimately the still higher ideographs upon the Copan monuments. If either of these forms is ever read, it is not improbable that the key will be found in this language of signs, which is still in constant use among the Western nations. It is a very ingenious and very expressive language.

down to the period of European discovery. The exceptions were the Village Indians, who, if not a minority of the whole population of both North and South America, were not much superior in numbers to the less advanced nations.* It will be perceived at once that the hunt is a precarious source of human subsistence. Without the horse to follow the larger animals of the chase upon the plains, it was entirely impossible for nations of men to maintain themselves from this source exclusively, or even principally. Increased numbers increased the diligence of the hunt in the same ratio, and this tended, in turn, to diminish the supply of game. Nations would rapidly perish if dependent upon so uncertain a source of maintenance. With the supply of fish the rule is different. In the ocean and in the lakes, which are the nurseries of fish, they are found in unlimited abundance. From these, as they enter the bays and rivers, they are taken in all seasons of the year with facility, and at certain seasons in the largest quantities. There is no doubt whatever that the principal reliance of the American aborigines for subsistence, with the exception at a later day of the Village Indians, was upon fish. This fact will be found to have an important bearing upon the formation of their centres of populations and upon their primary and secondary migrations. They were in reality, from first to last, nations of fishermen, who eked out their scanty sustenance with game, natural fruits, and bread roots, and afterwards — a portion of them — with the products of a limited agriculture. They were found in all the intermediate conditions, from those who subsisted principally upon fish, as the Athapascans and Ojibwas, to those who subsisted principally upon vegetable food, as the Aztecs and Tlascalans, and with no definite boundary line to separate one class from the other. A comparison of the principal facts bearing upon the point tends to show that *fish was the basis of subsistence* of the Indian tribes, to which their increase in numbers and diffusion over North America is to be ascribed. It was by the abundance of this article of food

* This opinion is expressed conjecturally. The Village Indians occupied but a small portion of the continent. They were confronted with Roving and partially Village Indians on every side, and their numbers, there are strong reasons for believing, have been grossly exaggerated.

that certain centres of population were created, which first supplied, and afterward replenished, the continent with inhabitants.

It should also be observed that the migrations of men are not fortuitous. They are deliberate movements, under the government of law. The influences by which they are immediately brought about are much less important than the physical conditions of climate and subsistence under which they are accomplished. An initial point of migrations does not become such by accident, but has of necessity a material basis in its natural advantages; and it may be remote from the place where the first ancestors of a family were planted, and reached only after several changes of location, and the lapse of centuries of time. Our first inquiry, therefore, should be, whether in fact there was any one region or district of country in North America which possessed advantages for Indian occupation so far superior to all others as to render it a natural centre of population, and consequently an initial point of migrations. If any such region existed upon an uninhabited continent, it would, when occupied, stand in a superior and commanding relation to every other portion of its area until this was peopled in all its parts, or until these advantages were neutralized by a change of conditions, — such, for example, as might result from the development of agriculture as a substitute for fishing and hunting.

Leaving certain other preliminary considerations which would naturally suggest themselves, I intend, in the remainder of this article, to examine, first, the geographical features of North America with reference to its natural highways or lines of migration; secondly, to compare its several regions with regard to the amount of subsistence which they respectively afforded to a people living as fishermen and hunters; thirdly, to test the results thus obtained by the statistics of Indian population in these several areas; and lastly, to consider the nature and distribution of Indian agriculture in other areas, as a means of counterbalancing these advantages. In this manner the fact can be ascertained whether any one region existed in North America possessed of such advantages in furnishing spontaneously means of subsistence as to make

it the natural nursery of the aboriginal inhabitants of the continent.

1. *Geographical Features of North America.* — These features may be considered under the threefold division of the prairie, the mountain, and the forest areas; the first being the least, and the last the most, desirable territory for Indian occupation.

First, the prairie areas. The great central prairies occupy the interior of the northern continent. In the vastness of their continuous expanse, and in the exuberance of their vegetation, they are without a parallel in any portion of the earth. They extend from latitude 29°, and south of it, to the north of Peace River in the Hudson Bay Territory, in latitude 60° north. In their greatest lateral expansion they extend from the western part of the State of Indiana, in longitude 9°, to the eastern base of the Rocky Mountain chain, in longitude 28° west of Washington. From this line of their greatest width from east to west, they contract gradually as they stretch both northward and southward, forming a vast inland plain, carpeted with grass, watered by great rivers, and encompassed by forests. The boundaries of this central prairie region will be made familiar by tracing briefly their circuit. Commencing upon the Rio Grande, which forms, in part, the southern boundary of the United States, and following the general line that separates the forest from the prairie northeasterly, a narrow belt of forest is found in Texas, bordering the Gulf of Mexico, but penetrated here and there by the prairie, which reaches the Gulf at several points, as at the mouth of the Nueces * and at Matagorda Bay.† Louisiana, the eastern part of Arkansas, and the southeastern part of Missouri, were originally forest; while all west of this line was prairie, with the exception of narrow fringes of forest along the rivers and water-courses, and of small and irregular belts of timber upon the lowlands. Crossing the Mississippi above the mouth of the Ohio, the prairies follow the wide belt of woodlands along the northern bank of the Ohio, until they reach and penetrate the State

* Bartlett's Personal Narrative, II. 529.

† Bancroft's History of the United States, III. 171.

of Indiana, where their eastern limit is found, with the exception of prairie openings in Central and Eastern Indiana and in Western Ohio. Turning thence in a northwesterly direction, the prairie touches the foot of Lake Michigan at Chicago, from which point northward the belt of forest along the western shore of Lake Michigan widens, so that the dividing line passes a number of miles west of the head of Lake Superior, whence it continues near the chain of small lakes to Lake Winnipeg. Keeping to the west of this lake and of Lake Manitobar, which is also bordered with forest, the boundary line of the prairies runs northwesterly to near the west end of Athapasca Lake, where it crosses Peace River, and extends beyond, to Hay River, near the sixtieth parallel, after which it bears southwesterly to the slopes at the foot of the Rocky Mountains. East, north, and northwest of this line there is forest, whilst all within is prairie.* Upon the plateau of Peace River, in the far north, are found the northern limits of these magnificent and verdant fields, upon which no eye can rest without wonder and admiration. Southward, along the base of the Rocky Mountain chain, the lower slopes of which are wooded to the edge of the plains, the prairies spread uninterruptedly to our starting-point on the Rio Grande.

This vast area, which traverses thirty-one parallels of latitude and nineteen parallels of longitude, in its greatest continuous expanse measures more than seventeen hundred miles from north to south, more than a thousand miles from east to west, and embraces upwards of eight hundred thousand square miles. It is not entirely a treeless region, neither is it separated from the surrounding forests by a sharply defined line. East of the Mississippi River the prairie area is a combination of forest and prairies, the latter greatly predominating. There are margins of forest along the rivers and water-courses, upon the hills, and in numerous districts of lowlands. Besides these there are irregular belts of forest, which run for miles independently of rivers and streams. Climate is an efficient cause of

* There are patches of prairie northwest of Hay River, in which the "timber buffalo," so called, is found. This animal is smaller than the ordinary buffalo, but believed to be the same species. Having traversed the intermediate forests, he has remained permanently in this far northern region.

the production of forest in the prairie area east of this river. The humidity of the atmosphere from the prevalence of winds from the Gulf of Mexico, which determines the climate of the region, tends constantly though slowly to extend the forest over the prairie and to increase the extent of its development upon the borders of the rivers. After crossing the Mississippi, in going westward, one finds a gradual diminution of the relative extent of forest, and this change becomes more rapid and marked beyond the Missouri, in Kansas and Nebraska.* As we recede from the influence of the Gulf winds and come in contact with the true climate of the prairies, it becomes constantly drier, since the remaining region is now shut in upon the west by the double barrier of the Rocky Mountains and the Sierra Nevada, which deprive the winds of their moisture on their passage from the Pacific eastward. After traversing about one hundred and fifty miles of Kansas, to the twenty-second meridian west of Washington, the western limit of arable land in the prairie area under consideration † is reached. Westward of this line the dryness of the climate continues to increase, the trees diminish in number and decrease in size, and finally disappear from the margins of the rivers. The grasses, yielding to the same influences, become less and less luxuriant, until the prairies, long before they reach the base of the mountains, degenerate under the summer sun into arid plains. Northward, on the Upper Missouri, the grasses never attain the luxuriance which they display in Eastern Kansas and Nebraska, by reason of the western trend of this river, but on the Upper Mississippi and along the Red River of the North to Lake Winnipeg they maintain a vigorous growth.

The most perfect display of the prairies is found in the eastern parts of Kansas and Nebraska. It is no exaggeration to pronounce this region, as left by the hand of Nature, the most beautiful country in its landscape upon the face of the earth. Here the forest is restricted to narrow fringes along the rivers and streams, the courses of which are thus defined as far as the eye can reach, whilst all between is a broad expanse of

* Ne-blas-ka, name of Platte River in the Kaw dialect, "overspreading flats with shallow water."

† Explorations for a Railroad Route, etc., to the Pacific, I. 25.

meadow-lands, carpeted with the richest verdure and wearing the appearance of artistically graded lawns. They are familiarly called the rolling prairies, because the land rises and falls in gentle swells, which attain an elevation of thirty feet, more or less, and descend again to the original level, within the distance of one or more miles. The crest-lines of these motionless waves of land intersect each other at every conceivable angle, the effect of which is to bring into view the most extended landscape, and to show the dark green foliage of the forest trees skirting the streams in pleasing contrast with the light green of the prairie grasses. In their spring covering of vegetation these prairies wear the semblance of an old and once highly cultivated country, from the soil of which every inequality of surface, every stone, and every bush has been carefully removed and the surface rolled down into absolute uniformity. The marvel is suggested how Nature could have kept these verdant fields in such luxuriance after man had apparently abandoned them to waste. This striking display is limited to about one hundred and thirty miles in the eastern part of Kansas and a narrower belt in Eastern Nebraska.

The great extent and peculiar features of the central prairie area have been brought thus prominently forward for the purpose of calling attention to two facts. In the first place, that this region interposed a serious, if not insuperable, barrier to free communication between the Pacific and Atlantic sides of North America. Between the thirty-second and fifty-fifth parallels, that is, from the southern boundary of New Mexico to the regions north of the Siskatchewun River, there are but three or possibly four routes of migration from one side of the continent to the other, — by the Siskatchewun to Lake Winnipeg, and thence by the chain of lakes to the valley of the St. Lawrence; by the Missouri to the Mississippi, the least probable of the four; by the Platte to the Missouri and thence to the Mississippi; and by the Arkansas to the Mississippi. On either route eight hundred miles of prairie, more or less, must be traversed in dependence upon the limited supply of game which the fringe of forest upon these rivers and the open prairies might be able to furnish, and over which American emigrants, aided by the ap-

pliances of civilization, have been barely able to pass. In the second place, that the greater part of this area west of the Mississippi, and nearly all of it west of the Missouri, was a solitude at the period of European discovery. It is perfectly evident from the nature of these prairies that they were never occupied by Indian nations, except in districts of very limited extent along the wooded margins of the great rivers by which they are traversed. A region more inviting to nomadic nations possessed of flocks and herds can scarcely be found upon any continent; but inasmuch as the American aborigines were fishermen and hunters, and could not lead a nomadic life upon these plains until they had obtained the horse, these vast pastures were to them a waste, except as the nurseries of the antelope, the elk, and the buffalo. America, generous in every other respect, had denied to her primitive inhabitants all useful animals capable of domestication, except the llama of the Andes.

West of the Rocky Mountains there are large expanses of prairie, in Colorado, Utah, Idaho, Nevada, and Arizona; in California, Oregon, and Washington; and also in British Columbia. Southward, in Mexico, the spread and boundaries of the prairies have not been so definitely ascertained. Chihuahua, Sonora, and Zacatecas have broad prairies within their limits, and patches of prairie land are said to be found, here and there, southward to the valley of Mexico.

2. *Mountain Areas.* — The mountain regions of North America are extensive, from the great length and lateral expansion of the Rocky Mountain chain, which, under different names, extends in substantial continuity from the Isthmus of Panama to the Arctic Sea. In its central part it sends off spurs and transverse ranges to such an extent, that, when to these are added the parallel ranges of the Sierra Nevada and Cascade Mountains, a large portion of the continent, west of the central prairies, is so broken up as to render it substantially a mountain country. Below the snow-line the declivities of most of these mountains are wooded, as well as their lower slopes for considerable distances outward. Portions of these ranges are sterile, from the dryness of the atmosphere, yet the greater part of them are not only habitable for man, but were in the

main well stocked with game, and their valleys with bread roots.* These great ranges furnished, as well as suggested, highways of migration. They also gave to these movements a general direction from north to south, or the reverse. It is not only probable, but it can be proved with reasonable certainty, that the migrations upon the Pacific side of the continent followed these mountain chains, rather than the prairies or the sea-coast. With respect to the method of these movements, it is not to be supposed that they were a series of flights of tribes or nations under the impulse of fear, seeking a distant habitation by the most convenient route, and leaving not a trace behind; they were rather a gradual spread from an original centre, preserving the continuity of the people over a large area, for the possession of which it was contending with bordering nations as it advanced outward. Such movements would result from the displacement from within of unsuccessful competitors for the occupation of an overstocked area.

It is another singular feature of the Northern division of the continent, that no mountain chain occurs east of the Rocky Mountains until the confines of the Atlantic are reached, where the moderately elevated Alleghanies are found, with more than fifteen hundred miles of prairie and forest between. The last-named range possesses but little importance with reference to the migrations of the Indian nations, as it was encompassed on all sides by the great American forests. The same is true of the mountain districts in the British Provinces.

* Among the peculiarities of the Rocky Mountains are the Parks. "The Parks of Colorado are elevated bowls in the mountain country, having the appearance of beds of inland seas upheaved and emptied of their waters by volcanic agency. They present to the eye scenery magnificent beyond description, made up of far-reaching forests, fertile meadows, and beautiful streams, surrounded by the lofty peaks of the great Rocky range. The principal of these parks are the North Park, ... Middle Park, ... South Park, ... Huerfano Park, ... and the grand San Luis Park in the southern part of Colorado, having an area of 18,000 square miles, watered by thirty-five streams, — sixteen of them emptying into the Rio Grande del Norte, which flows through its southern limit, and nineteen into San Luis Lake, which extends sixty miles from north to south in the centre of the park, and apparently without an outlet. This park is remarkable for its natural scenery, the grandeur of its forests, the fertility of its soil, the purity of its waters, and the vast deposits of peat in the vicinity of San Luis Lake." — *Report of the Commissioner of General Land Office for* 1868, p. 51.

3. *The Forest Area.* — The remaining, which is much the largest, part of North America, was covered with forests at the epoch of European discovery. To the American aborigines, as fishermen and hunters, they afforded a not inhospitable home. They offered every advantage which could render the lives of men in their condition capable of maintenance. But the vigorous and overmastering growth of forest vegetation, against which they had no power to contend, must have constantly retarded their advance in civilization. It is impossible to conceive of a region more unfavorable to the progress of nations out of a state of barbarism. And when, in course of time, the Indians obtained corn and the art of tilling the ground, the sturdy forces of nature first resisted and then tended to overwhelm their feeble appliances in husbandry. Notwithstanding these hindrances, and the oppressive burdens of forest life, the finest specimens of the Indian, north of Mexico, were found in the strictly forest nations. The progress they had actually made, under such immense disadvantages, although small, must heighten our appreciation of their natural capacities.

There are two sections of country not included in the areas already considered, — the "Barren Grounds" and the "Colorado Basin." The former occupy the northeastern corner of the continent, west of Hudson's Bay. They are bounded by a line drawn from the shore of this bay in latitude 61° north to the east end of Great Slave Lake, and thence northeasterly to the Arctic Sea. North and east of this line the entire region is destitute of trees and of every species of vegetation except the lichen. It is utterly barren, and more dreary than the ordinary desert, from its arctic climate.* The Colorado Basin is a district of considerable extent, traversing several parallels of latitude and meridians of longitude, situated south of the Humboldt Mountains and between the Colorado River and the Sierra Nevada. Later explorations show that this area is not properly a basin. There is a series of seven basins around and within the rim of the Great Basin, above which the lowest parts of the central area rise more than a thousand feet. The central portion,

* Richardson's Journal of a Boat Voyage through Rupert's Land, London ed. 1851, I. 151.

which forms much the larger part of the area, is broken up into mountain ranges running north and south, and having an average altitude of five thousand feet.* The sterility of the basin is explained by the dryness of the climate, the annual precipitation being estimated at five inches.† Notwithstanding its inhospitable character, this region still sustains a considerable Indian population, but of the lowest grade.

By the distribution of the prairie, the forest, and the mountain areas of North America, both the primary and the secondary lines of migration are clearly revealed. The principal line, upon the western half, is north and south. It was a great central route furnished and suggested by the Rocky Mountain chain. Parallel with this, and nearer to the Pacific, was a second highway along the continuous chains of the Cascade and Sierra Nevada Mountains, which extend from a point opposite Queen Charlotte's Sound to near the head of the Gulf of California. A third was the sea-coast. Between the Rocky Mountains on the west, and the Mississippi and St. Lawrence valleys on the east, the natural lines of migration were the great rivers, which were secondary in attractiveness and importance. North of Athapasca Lake the forest offered a free communication between the mountains and Hudson's Bay, although the principal rivers run northward. From this high northern region to the southern limits of New Mexico, the central prairie area could be traversed only on the lines of the rivers which flowed through them eastward. Of these there are but three, perhaps four, possible lines, as before stated. First, that of the Siskatchewun, which furnished the most feasible route; second, that of the Arkansas, possessing nearly equal advantages; third, that of the Platte, which is more difficult than either; and lastly, that of the Missouri, which is substan-

* The Shortest Route to California across the Great Basin of Utah, by Brevet Brig.-Gen. T. H. Simpson, 1869.

† "This great arid region may be said to embrace ten degrees of longitude and seventeen of latitude, drained only by the Columbia and Great Colorado rivers in any outlet to the sea. Fully half of it is the Great Basin of the interior, which does not receive sufficient water to require any external drainage. Taking the basin as nearly eight degrees of latitude and seven of longitude, we have ten hundred thousand square miles, so deficient in rain as to send out no rivers and to accumulate no considerable lakes." — *Blodgett's Climatology of the United States*, p. 352; and *Hyetal Chart*, p. 354.

tially an impracticable route, since the river runs for twenty-five hundred miles through open prairies. For the first four hundred miles east of the Rocky Mountains these rivers flow through dry and substantially treeless regions, and for the next four hundred through lands not much more inviting to fishermen and hunters. These obstacles presented a formidable barrier, as before remarked, to all communication between the Pacific and Atlantic sides of the continent. It is not improbable that an original family of mankind, planted in and overflowing from the valley of the Columbia as a nursery land, would reach Patagonia sooner than Florida, migrating under the influence exclusively of physical causes. The influence upon Indian migrations produced by the comparative facilities afforded by these several routes will be referred to again.

4. *Means of Subsistence and Centres of Population.* — The abundance or scarcity of food, in different parts of the continent, must have exercised a decisive influence upon the course of Indian migrations, both as to stock families and individual nations. The people would necessarily be drawn towards the regions where subsistence was most easily procured. In such places the largest development of numbers would naturally be found. These movements would be gradual, and represent long periods of time, as well as a series of struggles for the possession of the most desirable areas. It is difficult to form even a vague conception of the actual condition of the American aborigines in the early periods of their existence. They were thinly scattered over the greater part of the continent, and held together in small bands as fishermen and hunters, by the slender ties of Indian national life. With neither metallic implements with which to cultivate the soil, nor domestic animals for pastoral purposes, they were disunited, belligerent, and mutually destructive. One of the chief marvels connected with their history is the simple fact that so many of them, as we have reason to believe existed, were able to maintain life upon resources so limited and so fluctuating. It serves to demonstrate that the arts and appliances of barbarous nations are much more effective for human maintenance than a superficial examination of them would lead us to suppose.

A comparison of the principal regions of North America, north of Mexico, will reveal material differences as to the abundance of spontaneous means of subsistence. East of the Mississippi the most valuable portion was that which bordered upon the Great Lakes. These inland seas produced fish in abundance. The aborigines were able to take them in the bays that indented their shores, in the streams flowing into them, and in the rivers by which they were connected in a continuous chain. Although the shore-line of these lakes measures thousands of miles, there were particular districts which concentrated the advantages of each. Of these, the Rapids at the outlet of Lake Superior, held by the Ojibwas,* the Straits of Mackinaw, held at a later day by the Otawas,† the Georgian Bay, held by the Hurons, may be cited as examples. The south shore of Lake Ontario, and particularly the inland lake region of Central New York, occupied by the Iroquois, possessed excellent fisheries. But little inferior to these were the river districts of New England, in which fish from the ocean were found at particular seasons in great abundance, superadded to which were the shell-fish of the coast. From Hudson River

* The Crane tribe of the Ojibwas have the following legend of their origin: "The Great Spirit created two cranes, a male and a female, in the upper world, and, having let them through an opening in the sky, directed them to seek a habitation for themselves upon the earth. They were told, when they had found a place which suited them to fold their wings close to their bodies as they alighted upon the chosen spot, when they should be immediately transformed into a man and woman. The pair flew down to the earth and spent a long time in visiting different parts of the continent. They went over the prairies, and tasted the meat of the buffalo, which they found to be good, but they also came to the conclusion that it would not last. They passed over the great forests and tasted the flesh of the elk, the deer, the beaver, and of many other animals, all of which they found to be excellent; but they feared the supply of food from these sources would also fail. After making the circuit of the Great Lakes, and tasting the various kinds of fish with which their waters were supplied, they came at last to the Rapids at the outlet of Lake Superior, where they found fish in great abundance making their way through its noisy waters. They discovered that they could be taken with ease, and that the supply was inexhaustible. 'Here,' they said to each other, 'is food forever; here we will make our homes.' Near the site of Fort Brady, upon a little knoll near the foot of the Rapids of the St. Mary, which is still pointed out, the cranes alighted, folding their wings as directed. The Great Spirit immediately changed them into a man and woman, who became the first parents, and the progenitors of the Crane tribe of the Ojibwas." This legend was communicated to the writer by Wä-bé-ge-sin′ (White-Hawk), an Ojibwa of the Crane tribe.

† O-tä′-was: *ä* as in father, *a* as in ale.

southward to the James the country, for similar reasons, was favorable for Indian occupation. It required, however, south of the Great Lakes, the additional resources of game and of a limited agriculture to sustain the numbers found in possession of these several areas at the time of their discovery. The Gulf region was inferior to those already named in the means of subsistence it afforded. It was poorly supplied with fish, except upon the coast, and with game; but these disadvantages were compensated by a genial climate, and by the greater productiveness of the garden beds, upon which the inhabitants chiefly relied. There is a wide district of country upon both sides of the Ohio River, occupying half the space between the Great Lakes and the Gulf, which formed the poorest part of the area east of the Mississippi. It was not destitute of game, but poor in fisheries, and therefore uninhabitable without cultivation of the soil. The absence of lakes throughout this area, and the turbid character of the waters of the Mississippi, which excluded ocean-fish, furnish a sufficient reason why this entire region was a solitude at the period of European discovery. It also tends to show that the Mound-Builders, who occupied this area, — chiefly north of the Ohio, — were Village Indians (probably from New Mexico); otherwise they would not have selected this region in preference to others.*

* The earthworks of the so-called Mound-Builders seem to remain an insoluble problem in American ethnology. The authors of "The Ancient Monuments of the Mississippi Valley" remark in their preface (p. xxxiv.) that "the ancient enclosures and groups of works personally examined and surveyed are upwards of one hundred. . . . . About two hundred mounds of all forms and sizes, and occupying every variety of position, have also been excavated." Out of ninety-five earthworks (which probably mark the sites of Indian villages) figured and described in this memoir, forty-seven are of the same type, and may be assigned unhesitatingly to the Mound-Builders; fourteen are emblematical earthworks, mostly in Wisconsin, and may probably be assigned to them also; but the remaining thirty-four are doubtful. They may or may not belong to the class of Village Indians who constructed the works in the Scioto Valley. If to these are added the fifty or sixty emblematical earthworks in Wisconsin figured and described by Mr. Lapham, there may be one hundred and forty such works, large and small, genuine and doubtful, indicating the sites of Indian pueblos, of which something more than one hundred may have been in actual occupation at the same time. The earthworks proper must be regarded as the sites of so many pueblo villages, constructed and occupied by the Mound-Builders. The question then recurs, for what purpose did they raise these embankments, at an expenditure of so much labor? If a sensible practical use for these embankments can be found it will be more sat-

Along the east side of the Mississippi, above the Ohio, and upon its tributaries, were settlements of Algonkin nations; but

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isfactory to adopt the suggestion than be subject to the mischief in ethnology which comes from handing such remains over to the category of mysteries. "A large, perhaps the larger portion of these works," observe the same authors, "are regular in outline, the square and the circle predominating. . . . . The regular works are almost invariably erected on level river terraces. . . . . The square and the circle often occur in combination, frequently communicating with each other." (Ibid., p. 6.) "Most of the circular works are small, varying from two hundred and fifty to three hundred feet in diameter, while others are a mile or more in circuit." (Ibid., p. 8.) The walls of these embankments are for the most part slight, varying from three to six, eight, ten, and twelve feet in height, with a base of proportionate width, as appears from numerous cross-sections furnished by the authors. But the circular embankments are the lowest.

I am tempted to submit, for what it is worth, a conjectural explanation of the uses made of these embankments, on the reasonable assumption that the Mound-Builders were Village Indians from New Mexico, the nearest point from which such emigrants could have come into this area; who, as such, would have been apt to choose this region, so favorable for an agricultural subsistence, though so poor in fish and game. As Village Indians they would understand cultivation, the use of adobe brick, and the art of constructing communal houses, closed in the first story on the ground for defensive reasons, and entered through the flat roof by means of ladders, with which they ascended also. If, for example, a band of Village Indians, with such habits, emigrated from dry New Mexico to the Scioto valley in Southwestern Ohio, they would find it impossible to construct houses of adobe brick able to resist the frosts and rains of that climate. They would then be compelled to use stone, which they did not; or to build their houses of poles and bark upon the level ground, and thus change their habits; or to *raise embankments of earth as a substitute for the first story*, and construct their houses of poles and bark upon this foundation. It is not improbable that these embankments were constructed for this purpose, and were lined on their tops with long pueblo houses of poles and bark, — the best they were able to build. This conjecture has a basis of probability, and will bear further examination. If we examine the Scioto valley, the earthworks of which are the best specimens of the class, we find within an extent of twelve miles the remains of seven large pueblo villages, four upon the east, and three upon the west side of the river. The remains of each of the seven consist principally of an embankment of earth, several feet high, and correspondingly broad at the base, enclosing a square or slightly irregular area, each of the four walls or embankments being about a thousand feet long, with an opening or gateway in the middle of each, and usually at each of the four angles of the square. Attached, or quite near, to five of the seven are large circular enclosures, each formed by a similar but lower embankment of earth, and enclosing a space somewhat larger than the square enclosure. The height of the walls of four of the square enclosures are given respectively at four, six, ten, and twelve feet, with bases from thirty to fifty feet; and three of the circular embankments are five and six feet high respectively. The embankments around the squares were probably the sites of their houses, since as the highest they were best adapted to the purpose. When in use they were of course higher than at present, and probably with flat tops, and sides steeply graded. In houses thus erected upon elevated embankments, some of the features

the occupation of this region by them was comparatively modern, and their dependence more upon fish and game. The open prairies were also solitudes.

Bancroft estimates the number of Indians east of the Mississippi and south of the chain of lakes, at the beginning of the seventeenth century, at one hundred and eighty thousand.* This is as large a number as our information will justify.† There is not the slightest reason for supposing that they ever exceeded that number.

In the central prairie area, west of the Mississippi, there is but one district which calls for special notice. It is the coun-

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of security enjoyed in a house of the New Mexican model would be realized. Indians accustomed to such houses, and to spending their time upon terraced roof-tops, would be apt to resort to such embankments, if unable to construct houses of stone after finding adobe brick unsuitable, rather than to live upon the level ground. A number of these enclosures are ten hundred and eighty feet square, which gives an aggregate length of embankment of four thousand three hundred and twenty feet, without deducting the openings, each of the four embankments being divided at the centre. With each of the eight surmounted by a house about five hundred feet long and of the width of one apartment, accommodations would be furnished for a band of twelve hundred Indians, — about the average number in a large pueblo. The aggregate length of the apartments in the pueblo of Chetho Kette, on the Rio de Chaco, in New Mexico, including the several stories, is four thousand seven hundred feet, about equal in accommodations with one of those on the Scioto, constructed as supposed.

With respect to the embankments enclosing circular areas, the smaller ones might have been used in the same way, and even the larger, but for two objections; first, their want of sufficient height, and second, that if so used they would furnish accommodations for from two to four thousand additional persons, making, by the addition, too large a number for an Indian village. Other uses, such as that of a cemetery, or village common, might be suggested. In some of them mounds are found raised over the remains of deceased chiefs.

If the conjecture with respect to the higher embankments enclosing squares is well founded, charcoal and ashes, the remains of fire-pits, should still be found at intervals along their summits, unless the banks have been greatly reduced by the frosts and rains of centuries.

* "We shall approach and perhaps exceed a just estimate of their numbers two hundred years ago, if to the various tribes of the Algonquin race we allow about ninety thousand; of the Eastern Sioux, less than three thousand; of the Iroquois, including their Southern kindred, about seventeen thousand; of the Catawbas, three thousand; of the Cherokees, twelve thousand; of the Mobilian confederacies and tribes, that is, of the Chickasas, Choctas, and Muskhogees, fifty thousand; of the Uchees, one thousand; of the Natchez, four thousand: in all, it may be, not far from one hundred and eighty thousand souls." — *History of the United States*, III. 253.

† Consult, further, Greenhalgh's Estimate, 1677, Col. Hist. N. Y., III. 250; Sir William Johnson's Estimate, 1763, Ibid., VII. 582, and French Estimate, 1736, Ibid., IX. 1052.

try upon the head-waters of the Mississippi, which was occupied by the Sioux, or Dakotas, at the period of European colonization. For Indian occupation it is not inferior to the best of those previously described. Being a combination of forest with prairie, and within the range of the elk and the buffalo, it was an excellent game country; but its chief advantages were the lakes with which Northern Minnesota is literally crowded, which were well stocked with fish.* The Dakotas were without agriculture, and depended upon fish, game, and wild rice (*Zizania aquatica*, Linn.). They ranged eastward to Lake Superior, and westward to the Missouri. Their numbers when first discovered we have no means of knowing accurately. They were one of the great stocks of the Northern Indians, and stood next to the Iroquois in character and strength. The French estimate of 1736 gave them about twelve thousand.† They now number upwards of thirty thousand.

The Lower Missouri, from the mouth of the Platte River, was a poor country for Indian occupation. Several small nations dwelt upon its banks, and continued to maintain a bare subsistence. Above the Platte the forest is confined to the bottom lands within the bluffs, except in places near the mountains, and is interrupted for long distances even within this narrow valley. This river, from its turbid character, is also poorly supplied with fish. Buffalo abounded upon the entire course of the Missouri. They existed in millions upon the central prairies, but without the horse to give chase the Indian hunter was powerless, except by accident of position.

Canada and the Hudson Bay territory were, in the main, countries unfavorable to the sustenance of Indians. Fish and

* These lakes, which are from one fourth of a mile to ten and twenty miles in length, are connected, many of them, by continuous outlets, and are still well supplied with fish. It is a lacustrine region in the full sense of the term, about one twentieth of the surface being covered with lakes. I counted within an extent of sixty-five miles sixty-one lakes, in which number were included such only as contained clear water and were from an eighth of a mile to ten miles in length. They were within a belt not exceeding ten miles in width upon the route travelled, which was as far as the country could be seen, from the rolling character of the surface. These lakes were usually wooded upon the north and east sides, and bordered with prairie on the south and west, thus showing the prevailing direction of the winds.

† Colon. Hist. New York, IX. 1052.

rabbits were the principal food of their aboriginal inhabitants. The "Thick Wood" region lying around Hudson's Bay, and embraced within a circuit of three hundred miles from its shores, was cold, rugged, and swampy. Nearly half of this district is under water; and yet it was thinly peopled from Lake Winnipeg to the confines of the Eskimos on the coast of Labrador. There were no centres of population within this area. North of the prairie area, or of Peace River, there is a gradual descent of a thousand miles to the Northern Ocean. Its rivers and lakes are well supplied with fish, and its dwarfed forest with some kinds of game. A short hot summer visits both the Mackenzie and Yukon River districts, but for the remainder of the year it is intensely cold. Rigor of climate, however, is not an absolute barrier to Indian occupation, although unfavorable to an increase of numbers. This region has always sustained a considerable Indian population, which, within the last two centuries, through the peaceful relations preserved among them by the Hudson Bay Company and by the trade in furs, has largely increased.

In 1857 Sir George Simpson estimated the entire Indian population of British America, east of the Rocky Mountains, at sixty-seven thousand souls, including the Eskimos and excluding the half-bloods at Red River Settlement. Of this number he remarks: "Twenty-five thousand live principally upon buffalo meat, and thirty thousand live principally upon fish and rabbits." * West of the mountains, in a territory less than one eighth of this in extent, he estimates the number of in habitants at eighty thousand, and the reason for this great dif

* Report from the Select Committee on the Hudson Bay Company to Parliament in 1857, p. 96.

In the Appendix to this Report, at page 376, is the following estimate, made by Simpson, of the number of Indians in the Hudson Bay Territory: —

Thick Wood Indians, east side of the Rocky Mountains	35,000
The Plain Tribes, Blackfeet, etc.	25,000
The Esquimaux	4,000
Indians settled in Canada	3,000
Indians in British Oregon and on the northwest coast	80,000
	147,000
Whites and Half-breeds in Hudson Bay Territory	11,000
Total	158,000

ference will presently appear. The significance of this disproportion is increased by the fact that the development of the larger part of the population upon the prairies east of the mountains was subsequent to their possession of the horse.

The general character of the country east of the Rocky Mountains and north of New Mexico has now been sufficiently set forth to indicate the sections where a considerable population was developed, and the basis upon which it was sustained.

West of the mountains there is one particular district which rises in importance above all others upon the continent. On the northwest coast there is a region of ample extent, having Puget's Sound as its centre on the Pacific, and the valleys of the Columbia and Frazer's rivers within its circumference, which combined so singularly all the advantages of the mountain, the forest, the prairie, and the sea-coast as to give it a superiority over every other region either of North or South America. Within a radius of five hundred miles from the head of this sound,— from the Umpqua River on the south to Queen Charlotte's Sound on the north, and from the sea-coast to the western slopes of the Rocky Mountains, — this country, embracing the greater part of the drainage of the two rivers before named, was singularly well supplied at the time of its discovery with the requisites for the subsistence of Indian tribes. A mild and genial climate was added to its other advantages. In the amount and variety of the means of subsistence spontaneously furnished, it had no parallel in any part of the earth. It deserves a somewhat minute examination from the relation in which, by reason of this fact, it stood to the remainder of the continent.

A combination of forest and prairie rendered it an excellent game country, although it was not entered by the buffalo. Elk, bear, deer, mountain sheep, the rabbit, and the beaver were abundant, and as they found refuge in the fastnesses of the mountains or on the open prairies their extermination was impossible. With water and land fowls of different species the region was well supplied, together with wild fruits and berries of various kinds. In the kamash (kă'-mash) root, from which they prepared a species of bread, and which was found in inexhaustible supplies upon the prairies, they possessed a resource

of no small importance, particularly in seasons of scarcity.* Other bread roots were also found in this area, such as the cayuse and biscuit, and likewise a species of edible black moss,† each of which entered more or less into the subsistence of the aborigines. In these several respects this region was not greatly superior to some of those previously named. The signal advantages which it possessed were its inexhaustible salmon and shell fisheries. From these sources, and particularly from the first, arose that superabundance of food

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* The kamash is a white bulbous root resembling the onion. It has a blue flower, and ripens in June, in which month it is gathered. In Oregon and Washington it is found in abundance, literally covering, when in flower, some of the prairies. The kamash is first baked, then formed into cakes and dried in the sun and air, after which it will keep for a year. It is boiled with meat and also eaten alone. For the purpose of baking they make a cavity in the ground large enough to hold ten and even twenty bushels of the kamash, and line it with pebble-stones. After it is filled to the level of the surface with kamash roots, a covering of pebble-stones is placed over the mass, then a second covering of grass, upon which a hearth is formed of clay. Upon this hearth a fire is made, and continued for about seventy hours, the time required for baking. If the fire eats through the hearth, which is shown by a rise of steam from the kamash, the place is again covered with mortar. When the kamash is taken out it is black, soft, and very sweet to the taste. It is then made into cakes and dried, after which it is ready for use. The above particulars were communicated to the writer by Father De Smet, S. J., the distinguished Oregon missionary. Governor Stephens thus refers to this root: "The kamash root forms an important article of food when other supplies fail" (Pres. Mess. and Docs. 1854 – 55, Pt. I. p. 423); and George Gibbs, Esq., remarks: "The Skagits have a natural resource in their camash, which grows abundantly on the prairies of Whitby's Island. . . . . The camash, it is worth mentioning, improves very much by cultivation, and it is said to attain the size of a hen's egg in land that has been ploughed." (Explorations for a Railroad Route, etc., I. 4, 33.)

† This moss grows abundantly as a parasite on the pine-trees of Oregon and Washington, some of which will yield several bushels. It is gathered and washed, after which it is formed into balls, and baked in ovens in the same manner as the kamash, the baking requiring about forty-eight hours. It comes out in a fluid state, and is much like liquorice to the taste. After drying it in the sun they cut it into cakes and put it aside for use. They also mix it with the kamash after both are cooked, and let them harden together. When they are hardened separately they are pounded together and made into a kind of cheese. The kamash is highly nutritious; the moss only moderately so. The biscuit root yields a white flour when pulverized, and is eaten dry. Besides these they have a black edible root called the tobacco root, and the inner bark of a species of pine, which is sweet in flavor and used as food. There is a small oak, both in the Rocky and Cascade mountains, which yields plentifully an acorn of which they make a palatable and nutritious soup. The acorns are gathered in bags holding about eighty pounds, and buried in the sand. After a sufficient time they are taken up, the shells are removed, and the kernels dried and pounded into flour. From this flour the soup is made.

which tended to render this area the nursery of the Indian family. Along the inlets, bays, and islands of Puget's Sound, which has a shore line of fifteen hundred miles, and in the connecting waters of the Gulf of Georgia, oysters and clams are found in extensive beds, and at low tide are gathered with facility. The neighboring Indians not only subsisted upon them at certain seasons, but dried them on strings for exchange with inland inhabitants and for winter use.* It was the salmon fisheries, however, that gave to this region its pre-eminence. The salmon were not confined to the bays upon the coast, but they entered all the rivers of the country, and penetrated the recesses of the mountains as far as the tributary streams were sufficient in volume to admit their passage. Besides the annual run of the Chinook salmon, some species of this fish were found in the Columbia at all seasons of the year. The testimony of all observers is the same with respect to their marvellous abundance, their large size, and their excellent quality. Dr. Sukley, a surgeon in the United States Army, thus remarks: "They come up annually in great numbers on their way to the head-waters of the Columbia. The Indians, as before stated, all collect in the neighborhood of these and other falls, where they riot in feasting on their captured prey. They kill hundreds and thousands of these fish by spearing. The myriads of salmon that ascend the rivers of the Pacific coast are almost incredible. In many places the waters appear alive with them, and the shores are thickly lined with the dead and dying fish. . . . . The Columbia River sal-

* The Indians of Queen Charlotte's Island, as late as the year 1860, were accustomed to go down by sea to Vancouver's Island and spend the winter there to benefit by these shell-fisheries. They went in red-wood canoes, each large enough to carry fifty persons, and safe for miles out at sea. Mr. Gibbs remarks that "the tribes living upon the eastern shore possess also territory upon the islands, and their usual custom is to resort to them at the end of the salmon season, that is, about the middle of November. It is there that they find the greatest supply of shell-fish, which form a large part of their winter stock, and which they dry both for their own use and for sale to those of the interior." (Explorations, etc., I. 432.) Speaking of the Chinooks, at the mouth of the Cowlitz, the same writer remarks: "It was really the principal seat of the Chinooks proper, who resort to the Columbia mostly for their spring salmon, while they dug their clams and procured their winter supplies on the bay. It formed, in fact, a perfect Indian paradise in its adaptation to canoe travel, and the abundance of scale and shell fish which it furnished." (Ibid., I. 427.) *Vide* also p. 408, for an account of the mussel-shell beds on the Yakima.

mon weigh from six to forty pounds. The Indians along the river collect during the summer the fish which they want for winter use; these are split open and the bones removed, after which they are scarified in various directions, and then hung up for a short time in the smoke of a fire. They are then hung on poles or the branches of trees, where they are freely exposed to the wind. In a month they become perfectly dry, and are then housed in small storehouses. . . . . Salmon thus dried form the principal food of the natives during the winter." * He elsewhere observes: "The salmon of these waters, unlike those of other parts of the world, do not take the hook, and, strange as it seems, they are said never to stop searching after the source of the stream they are in. Their march is always ahead until they spawn and die; they never return to the sea. This seems to be the general opinion of the people with whom I have conversed." Mr. Gibbs, before mentioned, in speaking of the salmon-fisheries of the Yakima River, one of the tributaries of the Columbia, says: "Besides the fisheries at the Dalles, the Yakimas have others on their river, up which the salmon run without interruption far into the mountains. On the main fork in particular they penetrate to Lake Kitchelus, at the very foot of the dividing ridge. In addition to the different kinds of salmon proper, they have also the salmon-trout, two varieties of the speckled trout, — the red and black spotted, both of them growing to a large size, — and some other species of fresh-water fish. The salmon they take in wears and cast-nets. The wears are constructed, with considerable skill, upon horizontal spars and supported by tripods of strong poles erected at short distances apart, two of the legs pointing up stream and one supporting them below. There are several of these wears on the main river, fifty or sixty yards in length. The cast-net is managed by two men in a canoe, one of whom extends it with a pole and the other manages the rope." † Elsewhere the same writer

* Explorations for a Railroad Route, etc., to the Pacific, I. 299.

† Ibid., p. 407. At the Sault Ste. Marie, the Ojibwas use a scoop-net to take white-fish in the rapids. Two men push out into the stream in a birch-bark canoe, one at the stern to manage the boat with a pole and force it up the rapid, while the other, standing at the bow, takes the fish by plunging the net to the bottom and bagging them as they attempt to run up the rapids. The pole to which the net is attached is about ten feet long. This method is highly successful.

remarks: "The fishery at the Kettle Falls is one of the most important on the river; and the arrangements of the Indians, in the shape of drying-scaffolds and storehouses, are on a corresponding scale. They take the fish by suspending immense baskets upon poles beneath the [water as] traps, into which the salmon spring." *

Father De Smet described to the writer this method of basket-fishing, which he had frequently witnessed at these falls. The basket is made of willow, from fifteen to twenty feet long, five or six wide, and about four feet deep, with a high back upon one side, which is designed to rise above the surface of the water. A stick of timber is firmly anchored in the rocks below the falls, extending out over the stream twenty or thirty feet. To this the basket is suspended, and so far submerged as to leave the back just above the water up stream, while the opposite side is several inches below the surface of the water, and down stream. The ascending salmon rise up the side of the basket and spring into it, where they are held, their passage up being arrested by the high back; and as they never turn their heads down the current they are retained securely. After the basket in this manner is well filled, a man descends into it and hands out the fish. Two hundred salmon, weighing from six to forty pounds each, have been caught in this way in a few hours. They are also speared in great numbers. It was a common occurrence, he remarked, to take three thousand salmon in a day, since there was no limit to their numbers, and a whole band of Indians were engaged in the work. The fish were divided equally among the women each day, the number of females in each family forming the basis of distribution. He further observed that he once spent thirty days at these falls, in the fishing season, with the Kootenays, and received for his share of the fish taken a sufficient quantity, when dried, to load thirty pack-mules.† These falls are fifteen feet high, but they present no barrier to the passage of the salmon up the river. He had often seen them leap these falls in great numbers; in doing which they keep near the surface of

* Explorations for a Railroad Route, etc., to the Pacific, I. 413.

† The natives also prepare fish pemmican from the salmon. After it is dried they pulverize it and mix it with fish oil, and then form it into cakes. It will not, however, keep as long in this form as when dried.

the descending water, and shoot themselves up at one dart, and then continue their course. It is simply swimming up at a faster rate than the water falls. In these attempts they often fail, and are thrown back into the stream. They ascend to the head-waters of the Columbia and its tributaries, filling the small streams, where, worn out and exhausted, they perish in myriads. They are not found in Clarke's River, however, above the great falls.

Lewis and Clarke, the first explorers of the Columbia, make frequent reference to the salmon-fisheries, the methods by which the fish were taken, and their unlimited numbers. "The multitudes of this fish," one of them remarks, "are almost inconceivable. The water is so clear that they can readily be seen at fifteen or twenty feet, but at this season [October, 1805] they float in such quantities down the stream, and are drifted ashore, that the Indians have only to collect, split, and dry them on scaffolds. . . . . The Indians assured me by signs that they often used dried fish as fuel for the common occasions of cooking." * Farther on they write: "At the distance [of] two miles below [on the Columbia] are five new huts, the inhabitants of which are all engaged in drying fish, and some of them in their canoes killing fish with gigs; opposite to this establishment is a small island in a bend towards the right, on which there were such quantities of fish that we counted twenty stacks of dried and pounded salmon." † These stacks are subsequently explained as follows: "When it [the fish] is sufficiently dried it is pounded fine between two stones till it is pulverized, and is then placed in a basket about two feet long [deep] and one in diameter, neatly made of grass and rushes, and lined with the skin of a salmon, stretched and dried for the purpose. Here they are pressed down as hard as possible, and the top covered with skins of fish, which are secured by cords through the holes of the basket. The baskets are then placed in some dry situation, the corded part upwards, seven being usually placed as close as they can be put together, and five on the top of them. The whole are then wrapped in mats, made fast by cords, over which mats are again thrown. Twelve of these baskets, each

* Travels, etc., to the Pacific Ocean, London ed., quarto, 1814, p. 353.

† Ibid., p. 363.

of which contains from ninety to one hundred pounds, form a stack." * Twenty such stacks would contain about twenty-four thousand pounds of dried fish.†

The Columbia River Indians changed their residences at the different seasons of the year, much in the same manner as the aborigines east of the Mississippi at the period when they were first visited by Europeans. The Iroquois, for example, after planting their garden-beds in the spring, most of them, left their villages for their different fishing-encampments, to return again in midsummer when the corn was in the green ear. In the autumn, and again in the winter, parties went out upon the autumn and winter hunts, to return before winter and spring. Lewis and Clarke describe the routine of the Columbia River Indians at the period of their visit, by saying that "the inhabitants of the Columbia plains, after having passed the winter near the mountains, come down as soon as the snow has left the valleys, and are occupied in collecting and drying roots till about the month of May. They then crowd the river, and, fixing themselves on its north side to avoid the incursions of the Snake Indians, continue fishing until about the first of

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* Travels, etc., to the Pacific Ocean, p. 365.

† Irving, in his Bonneville (p. 385), gives an account of the salmon-fisheries of Snake River, one of the tributaries of the Columbia, as follows: "They take these fish in great quantities and without the least difficulty, simply taking them out of the water with their hands, as they flounder and struggle in the numerous long shoals of the principal streams. At the time the travellers passed over these prairies, some of the narrow deep streams by which they were traversed were completely choked with salmon, which they took in great numbers. The wolves and bears frequent these streams at this season to avail themselves of these great fisheries." And again on page 396: "It was on the 20th of October when they found themselves once more on this noted stream. The Shoshonees, whom they had met with in such scanty numbers on their journey down the river, now absolutely thronged its banks, to profit by the abundance of salmon and to lay up a stock of winter provisions. Scaffoldings were everywhere erected, and immense quantities of fish drying upon them. In some places the shores were completely covered with a stratum of dead salmon, exhausted in ascending the river, or destroyed at the falls, — the fetid odor of which tainted the air."

In the rivers of Maine the same thing is occasionally witnessed, where wagon-loads of fish are sometimes found dead upon the banks, and carried away for manure. This is said to be occasioned by stampedes or panics among the fish themselves, when moving in large numbers up stream and encountering some obstruction like shoal water, — the momentum of those below crowding those above into a mass, and forcing them finally upon the land, where they remain to perish. In like manner the beds of dead salmon found upon the tributaries of the Columbia are probably to be explained.

September, when the salmon are no longer fit for use. They then bury their fish and return to the plains, where they remain gathering quamash till the snow obliges them to desist. They then come back to the Columbia, and, taking their store of fish, retire to the foot of the mountains and along the creeks which supply timber for their houses, and pass the winter in hunting deer and elk, which, with the aid of their fish, enables them to subsist till in the spring they resume the circle of their employments." *

Another prominent characteristic of this region is the mildness of the climate as compared with that upon the same parallels on the Atlantic coast. It is important, since it rendered less clothing and less subsistence necessary, and thus favored an increase of numbers. The mean temperature for spring ranges from 45° to 50°; for summer, from 60° to 65°; for autumn, from 50° to 52°; and for winter, from 35° to 40°; giving a mean temperature for the year ranging from 50° to 52½°. The annual precipitation varied from thirty to sixty inches in different parts of the area.†

The superior advantages which abundance and variety of food and fineness of climate gave to this region over every other part of North or South America cannot fail to arrest attention. Its superiority for Indian occupation is created in the main by the concurrence of a good climate with the possession of the most bountiful and widely distributed fisheries to be found in any part of the earth. These two elements, superadded to other advantages not surpassed if they are equalled elsewhere, must have exercised a potent influence upon population. From the superabundance of the means of subsistence, which belongs to this region above every other already described, or remaining to be noticed, the inference arises that this area would develop a surplus of population from age to age; and that it would become permanently the point of departure of migrations to different parts of the continent. The facts are sufficient to raise a presumption that the valley of the Columbia was the region from which both North and South America were peopled in the first instance, and afterwards resupplied with inhabitants.

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* Travels, etc., to the Pacific Ocean, p. 444.

† Blodgett's Climatology of the United States; Isothermal and Hyetal Charts.

A larger population would be expected in this area than in any other of equal extent, with the exception of districts where agriculture was the basis of subsistence; and the population was, in fact, denser, but the excess was not large. The reason must be sought in the nature of the institutions of the Indians, which precluded the formation of a state. They were found subdivided into a large number of petty nations, speaking dialects of several different stock languages, which are more numerous in this area than in any other of equal extent in North America, thus affording decisive evidence of the great antiquity of its occupation. It also shows that no single nation had been able to consolidate these several nations into one in this, any more than in other parts of the continent. The constant tendency was to disintegration, subdivision, and displacement. This tendency is inherent in the institutions of barbarous ages, and continues in force until the institutions of pastoral or advanced agricultural life supplant them. Confederacies of nations serve in some measure to counteract these results; but none existed, of which a knowledge is preserved, in the valley of the Columbia.

The first estimate of the number of the Indians in that region was made by Lewis and Clarke, in 1805. It included all the nations upon the Columbia and its tributaries of which he obtained knowledge, those upon Puget's Sound, and those in the southern part of British Columbia. They were estimated in the aggregate at eighty thousand souls, which was probably an unexaggerated estimate. In 1857, the Indian population in British America, west of the Rocky Mountains, was estimated, as has been stated, at eighty thousand. This included the Louchoux or Kutchin (Kŭ-tchin′),* of the Yukon and Peel rivers,† and some small bands scattered along the narrow belt of land between the Russian Possessions and the Rocky Mountains, north of the fifty-fourth parallel of latitude. The bulk of these Indians were south of this line, and within the area described. Vancouver's and Queen Charlotte's Islands and the valley of Frazer's River were well adapted to Indian occupation,

* ŭ as *oo* in *food*.

† Mr. Murray, before mentioned, who established the first trading-post on the Yukon, informed the writer, in 1861, that this nation numbered from three to four thousand.

and undoubtedly, in 1805, sustained a very considerable Indian population. For that part of the area not covered by the estimate of Lewis and Clarke, about fifty thousand may be added, which would give a much larger aggregate number than was found in any other region of equal extent north of Mexico.

California, which embraces a large area, possessed only ordinary advantages for the support of an Indian population. In 1802, the Spanish missionaries estimated the number of Indians at thirty-two thousand and a fraction over; and in 1852 the Secretary of State of California estimated them at about the same number.*

The Roving and partially Village Indians have now been sufficiently considered with respect to their centres of population, their means of subsistence, and their numbers. It remains to notice briefly the strictly Village Indians, who inhabited the comparatively small area from New Mexico to the Isthmus of Panama. Portions of this area were occupied by Roving Indians, other portions by partially Village Indians, and still other portions were either solitudes or neutral grounds separating hostile nations. The largest development of numbers was in and around the valley of Mexico, and in Yucatan and Guatemala. A dense and unsubdued forest overspread the greater part of Central America, and Mexico was, in the main, a forest country. Since the Village Indians depended upon agricultural subsistence, and occupied a section of the continent poorly supplied with fish and game, inquiry should be directed to the nature and extent of their agriculture. If the degree of its productiveness could be ascertained, it might afford means of ascertaining their probable numbers, and whether it secured to them any positive advantages over the barbarous nations in a contest for the mastery of the continent. Before considering the subject of Indian agriculture, the geographical location of the several nations of Village Indians should be noticed.

Of New Mexico they were the chief possessors, occupying the valley of the Rio Grande and its tributaries, and the valleys of the eastern and southern tributaries of the Colorado. They were found, in 1540, living in great communal houses

* President's Message and Documents, 1855 – 56, Pt. I. p. 575, and note.

constructed of stone or of adobe brick, and several stories high. They dwelt not in single houses with one family in each, nor in many houses grouped together, but in one great house constructed upon a definite model, containing two hundred apartments, more or less, and large enough for an entire band or nation. In rare cases several such houses were grouped together, as at Zuñi; but usually they were situated a mile or more apart, in the same valley, the different bands being leagued together for mutual defence where they spoke the same dialect, or dialects of the same stock language. Castañeda, who accompanied the expedition of Coronado to New Mexico, in 1540–1542, estimated the population of the fourteen villages of Cibola and Tucayan at four thousand men (probably warriors) and that of the numerous villages on and near the Rio Grande and its tributaries at sixteen thousand souls,— which would give an aggregate of about fifty thousand Village Indians.*

From New Mexico southward for about eight hundred miles the country was unfavorable to Indian occupation. As it was thinly peopled, probably its inhabitants never came into prominent notice. But thence southward to the Isthmus the country was more favorable to a population depending upon agriculture for sustenance. With a tropical climate, relieved by table-lands, the disadvantage of the absence of fisheries and of the larger forest-animals was more than counterbalanced by increased agricultural production, and by wild fruits and useful plants. These advantages were again lessened by geographical location and contracted areas. The drift of population seems to have been down the mountain-chains to the valley of Mexico, and thence toward the Isthmus, the only means of exit from the northern half of the continent. Any nation attempting to hold the table-lands of Mexico, forming as they do a natural gateway to the distant south, must have been able to repel and turn back this flow of migrating bands, or have been swept away by the current. Moreover, barbarous nations are strongly attracted to the seats of even partial civilization for purposes of rapine and plunder: witness the continuous assaults of the Apaches and Navajos, within the last hundred years, upon the Village Indians of New Mexico, and the ruined and abandoned

* Coll. Ternaux-Compans, Vol. IX.

pueblos within that area. History furnishes some evidence tending to show that no nation, previous to the Aztecs, had been able to hold permanently the table-lands of Mexico, or to develop a population upon the basis of agriculture, able to maintain itself there, much less to extend its power and influence northward. The Toltecs, of whose previous occupation, advancement in civilization, and retirement from the valley we have some information, doubtless repeated the experience of nation after nation which had preceded them. At the time of the Spanish conquest the Aztecs had been dominant in the valley about two hundred years, and coming, like their predecessors, from the north, they had neither extended their conquests, nor planted a colony north of the borders of the valley. On the contrary, they were confronted by hostile and independent nations on the west, northwest, northeast, and east sides; that is, upon all sides except the southwest, south, and southeast, in which latter directions they had extended their authority over the more feeble portion of the southern Village Indians.

With respect to the numbers and the social and civil condition of the Village Indians of Mexico and Central America at the time of the conquest, our information is very far from satisfactory. From the outset the phenomena of their civilization appear to have been to the invaders an enigma of marvellous interest; but we have lost the principal facts necessary for its elucidation, in gaining volumes of romance.

At that period the areas above named were occupied by forty petty nations — more or less — speaking dialects of several different stock languages, living chiefly in villages, and depending upon agriculture for a subsistence. Their villages were constructed in eligible situations upon the margins of lakes, the banks of rivers and streams, and sometimes in positions of natural strength. Since their agriculture was confined to garden-beds around and near their villages, the greater portion of these countries was a wilderness without inhabitants, except as it was traversed by hunting-parties or roving bands. Each nation, or confederacy of nations, was under its own chiefs, and governed in accordance with those usages and customs which were the common inheritance of the Indian race. The evidence that any considerable number of these nations were

consolidated into a state is not satisfactory. In other words, it cannot be affirmed that any number of these nations speaking different stock languages had become absorbed into one national organization, with common laws, and one executive government to which they all acknowledged allegiance and from which they received protection. The Aztec confederacy, the dominant Indian power of the period, had subdued the nations south of the valley, in a westerly and southerly direction to the Pacific, southeasterly to Guatemala, Yucatan, and the Gulf of Mexico, and along the western shores of the Gulf near Vera Cruz; and they are said to have been the terror of surrounding nations, from their confederate organization, their numbers, and their sanguinary character. The nations which they had conquered were subjected to tribute, and held in the nominal connection which its payment implies; but the Aztecs and their confederates did not spread over the territories of these nations, nor attempt to impose upon them either their language, their customs, or their direct civil administration. At least there is no satisfactory evidence that they did. Traces are found among these nations of the three stages of political organization common among the northern Indians: first, the tribe, composed of persons of the same immediate descent; second, the nation, consisting of several tribes intermingled by marriage and speaking the same dialect; and lastly, the confederacy of nations speaking dialects of the same stock language. Most of them appear to have been in the second stage, organized into nations; but a portion of them had reached the third, of which the Aztec, the Tlascalan, and perhaps the Cholulan and Michuacan confederacies are examples. With respect to the tribal organization, the evidence is fragmentary. Among the Aztecs the descent of the office of chief from brother to brother, or from uncle to nephew, can be explained only by the hypothesis of a division into tribes, with descent limited to the female line, as among the Iroquois.*

The Aztec confederacy embraced the Aztecs, Tezcucans, and Tlacopans,† who spoke either the same, or dialects of the same

* League of the Iroquois, p. 87.

† There is some uncertainty concerning the correct name of the third nation. Tlacopan, on the west side of the lake, was the name of the pueblo of the Tepanecans, one of the seven nations who "came from the far countries which lie toward

language, and occupied, in conjunction with other villagers of kindred descent, the valley of Mexico. It is not improbable that the Chalcans, and other villagers who maintained a distinctive name, were independent members of the confederacy. The valley is oval in form, being longest from north to south, and is about one hundred and twenty miles in circuit. A large portion of it is covered with lakes. It is surrounded by a series of hills, one rising above the other, with depressions between, encompassing the valley with a mountain barrier. Within it the nations just named resided at the time of the Spanish conquest, in about thirty pueblo villages, more or less. There is no evidence that any considerable portion of the confederates resided outside of the valley and the adjacent hill-slopes; but, on the contrary, there is satisfactory evidence that the remainder of modern Mexico was then occupied by nations who spoke stock languages different from the Aztec, and most of whom were independent of the Aztec power. This fact has a material bearing upon the probable numbers of the people thus confederated. Any estimate here must be purely conjectural. There are no materials from which an approximation to accuracy can be made. There is no doubt that a much larger population was found in particular districts of Mexico and Central America than in any other equal area in North America, and that the valley of Mexico contained a larger number of people than any other district of equal extent. But there is no ground for reckoning this population by millions; * a much

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the north, ... to people the land of Mexico." (Joseph Acosta, Nat. and Mor. Hist. East and West Indies, Lond. ed. 1604, Grimstone's Trans. p. 500.) The latter would seem to be the correct name of this nation.

* It is a common statement, running through most of the histories of the Conquest, that the pueblo of Mexico contained *sixty thousand houses*. Zuazo, who visited Mexico in 1521, cited by Prescott (Conquest of Mexico, II. 112, note), wrote *sixty thousand inhabitants;* the Anonymous Conqueror, "sixty thousand fires"; but Gomara and Martyr wrote *sixty thousand houses*, and the last has since been steadily repeated by Clavigero (Hist. of Mexico, Phila. ed. 1817, II. 360); by Herrera (Hist. of America, Lond. ed. 1725, II. 360); and by Prescott (Conquest, etc., II. 112). Solis says *sixty thousand families* (Hist. Conquest of Mexico, Lond. ed. 1738, I. 399). Torquemada, cited by Clavigero (Ibid., II. 360, note) increases the number to *one hundred and twenty thousand houses*. There cannot be a reasonable doubt that the houses of the Aztecs were most of them great communal edifices like those in New Mexico, some of them large enough to accommodate a thousand or more people. This magnifies the exaggeration to an impossibility. If these later writers had any

smaller number would have exhausted the resources of the country as developed by Indian agriculture. In the valley of Mexico, excluding the lakes, and including a liberal belt of surrounding hills, there may be fifteen hundred square miles of land. If we allow one hundred and seventy inhabitants to the square mile, which is double the average number to the square mile in the State of New York, it would give to the nations of the valley two hundred and fifty-five thousand souls. It is difficult to see how so large an estimate can be sustained.

With respect to the nations and languages of Mexico, modern research has advanced but little beyond the sketch of Clavigero, except in relation to the grammatical structure of some of these languages. It will be sufficient to follow his authority for the names and locations of the principal remaining nations. He enumerates fourteen stock languages in Mexico and Yucatan.*

The most prominent Indian nations contemporary with the Aztecs were the Chichemecs, who occupied the country on the northwest border of the valley, and ranged westward well towards the Pacific. They were non-agricultural, and independent of the Aztec confederacy. † South of them were the Otomies, who for the most part were non-agricultural and independent. A portion of them near the valley appear to have been subdued by the Aztecs. These nations spoke different languages. South of the Otomies and immediately west of the valley of Mexico were the Michuacans, who occupied a large area extending towards the Pacific. They spoke the Tarasca language, and were independent of the Aztecs. Southwest of the valley, and bordering upon it, were the tributary Matlatzincas, an inconsiderable people, who spoke a language of the same name, and occupied, with a portion of the Otomies, the valley of Talocan. On the northeast of the valley, and about eighty

real knowledge of the subject, it must be supposed that they meant "apartments" instead of "houses," treating each great house as a block of houses, and estimating the number of rooms. Zuazo's estimate is probably the nearest to the truth.

* History of Mexico, III. 371.

† "The ancient and first inhabitants of New Spain were men very barbarous and savage, which lived only by hunting; for this reason they were called Chichemecas. They neither sow nor till the ground." (Acosta, Nat. and Mor. Hist., etc., p. 497.) Although Acosta makes this a general name for the Roving Indians in Mexico, there was a distinct nation of this name in the region referred to.

miles distant, were the Meztitlans, who spoke a dialect of the Aztec, but were independent. East of the latter, and ranging to the Gulf of Mexico, in the region around Tampico, were the Huastecas, who spoke the Huastec language, and were independent. South of them, and ranging along the gulf as far as Vera Cruz, were the Totonacs, who spoke the language of the same name, and acknowledged the supremacy of the Aztec confederacy. Between them and the valley of Mexico, but confined to an area of moderate dimensions, were the sturdy Tlascalans, also independent. Southwest of them were the Cholulans, supposed to have been a subdivision of the Tlascalans. Whether the Tlascalan was an independent stock language is not ascertained. It is asserted that the Cholulans were subdued by the Aztecs shortly before the Spanish conquest; but Clavigero places them in the list of independent republics.* In the areas south of the several nations named, between the valley of Mexico and the Pacific, and extending eastward to Guatemala and Yucatan, were several other nations, of whom the names and locations are preserved, and but little besides. Among them were the Mixtecas and Zapotecas, who spoke the Mixtec and Zapotec languages; the Chinantecas, Mazatecas, Tlahuicas, Cohuixcas, Popolocas, and several others scarcely needing enumeration, — all supposed to have been tributary to the Aztec confederacy.† Whether these Village Indians were permanently subjugated, and acknowledged their dependence by paying periodical tribute, or whether their submission ended with the foray that enforced the tribute, we are not precisely informed.

The Village Indians of Yucatan and Guatemala were, probably, the highest of the class in North America, as well as the oldest in their civilization. They possessed some advantage in their sheltered position behind the Gulf of Mexico, and off the great highway of migration to South America, toward which the movements of the northern Indians tended to drive the fragmentary and broken nations. The remains of their pueblos in ruins bear testimony to their higher development. Their agriculture must have been more efficient, to over-

* History of Mexico, I. 6.

† Doña Marina, the interpreter of Cortes, was born in the province of Coatzacualco, on the Gulf of Mexico, near the Tabasco River, and spoke a dialect of

come the superior activity of the forces of nature in a tropical climate. "The kingdom of Yucatan," says Las Casas, Bishop of Chiapa, who wrote in 1539 the relation from which we quote, "contained a prodigious number of people; the air of the country is very temperate and pleasant; it has great plenty of fruits, and all the necessaries of life; it exceeds Mexico itself in fertility. . . . . The inhabitants of it are more polite, more civilized, and better civilized in morals and in what belongs to the good order of societies, than the rest of the Indians. There is a remarkable prudence and justness of mind in them, which is not to be found in others." * And Herrera remarks to nearly the same effect: "These people were then found living together very politely in towns, kept very clean, without any ill weeds growing about, but with fruit-trees orderly planted. Their temples were in the midst of their towns, and near to them the houses of their prime men and priests, those of the commonalty being farther off; and the common wells were in the squares or market places; and the reason of their being so close together was because of the wars which exposed them to the danger of being taken, sold, and sacrificed; but the wars of the Spaniards made them disperse." † From the references of Las Casas to the number and location of the pueblo villages in Yucatan and Guatemala, it is to be inferred that they were numerous, and, when constructed upon the banks of rivers, were so near together as to be in sight of each other, in some cases, for miles together. These tribes seem to have followed precisely the same method of building as the Village Indians of New Mexico.

Within a few years after the conquest of Mexico the pueblo villages of Yucatan, Guatemala, and Honduras were ravaged by military adventurers, and the people driven from their pueblos into the forests. The Spaniards destroyed in a few years a higher civilization than they substituted in its place.

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the Aztec language. "Doña Marina understood the language of Guacacualco and Mexico, which is one and the same." (Bernal Diaz, True Hist. Conq. of Mexico, London ed. 1803, I. 76.)

* An Account of the first Voyages and Discoveries made by the Spaniards in America, London ed. 1699, p. 52.

† Herrera, IV. 168.

"The pretence," says Las Casas, "of subjecting the Indians to the government of Spain is only made to carry on the design of subjecting them to the dominion of private men, who make them all their slaves." *

The Maya language was spoken in Yucatan; the Quiche, Poconchi, and some other languages in Guatemala; and the Chontal in Nicaragua. Oviedo, who was in the last-named province in 1526, states that there were five languages spoken there, of which the one most extensively used was the same as the Aztec. †

It is not improbable that the nations of Mexico and Central America above enumerated were so described on the ground of a common language, and that some of them were subdivided into nations speaking dialects of the same stock language. The continuity of territorial possession is usually well preserved by nations of the same speech; but this did not arrest the inevitable tendency to disintegration inseparable from their institutions. The number of nations must be measured by dialects, and not by stock languages. It is further probable that each group of pueblos occupied by people speaking the same dialect was independent, except as several such groups were confederated for mutual protection. In strictly village life the tendency to disruption was even greater than in the non-stationary condition; and consequently the Village Indians, although more numerous in equal areas, were probably more disunited and less efficient and warlike than the barbarous nations.

Having now considered the most important districts of North America with reference to the means of subsistence which they respectively afforded, and compared the particular advantages of each with such statistics of actual population, except as to the Village Indians, as our limited information furnishes, inquiry should next be made into the nature and extent of Indian

* Account of the first Voyages, etc., p. 119. Elsewhere he quotes from the letter of the Bishop of St. Martha to the king, as follows: "To redress the grievances of this province, it ought to be delivered from the tyranny of those who ravage it, and committed to the care of persons of integrity, who will treat the inhabitants with more kindness and humanity; for if it be left to the mercy of the governors, who commit all sorts of outrages with impunity, the province will be destroyed in a very short time." (p. 61.) He also says, "Fourscore towns and villages at least were burned in the kingdom of Xalisco." (p. 51.) The good bishop's numbers must be received with caution.

† Trans. Am. Ethn. Soc., I. 7.

agriculture; and this for the purpose of ascertaining whether a subsistence derived from agriculture, or one procured by fishing and the chase, tended to the more rapid production of a surplus population to be sent forth as emigrants into other areas.

Indian agriculture was based upon one cereal, Indian corn, and upon three indigenous plants, the bean, the squash, and tobacco. To these, cotton, a species of pepper, and of onion, were added in some areas. The Aztecs, and some of the nations south of them, had, without cultivation, several useful fruits and plants, such as cocoa, — from which they prepared chocolate, — the banana, and the maguey. The art of cultivating the ground doubtless sprang up as a happy accident, after the Indians had overspread North America and discovered these "gifts of the Great Spirit to the red man." Where it originated it is impossible to ascertain, though one may reasonably conjecture that it must have been in a tropical climate, in some moist, hot region, where corn is most prolific and was probably indigenous. Its introduction was a great event in the primitive history of the Indians. Without agriculture they could not have reached the second stage of their development, namely, that of permanent villagers. After the art of cultivating corn was acquired, agriculture would spread with the people; but it would not be restricted to the lines covered by their migrations. In many fortuitous ways it might be transferred from nation to nation by the opportunities of aboriginal life. The art spread, in the course of time, throughout Central America, Mexico, and the West India Islands. Northward it was carried, it must be supposed, first into New Mexico, and thence to the Mississippi valley, whence it spread from the Gulf of Mexico to the chain of lakes and as far east as the Kennebec River. The Hurons introduced it on the Georgian Bay of Lake Huron, the Shiyans on the river of that name, a tributary of the Red River of the North, and the Minnitarees on the Upper Missouri. It was unknown in all other parts of North America, and confined to mere patches of land within the areas named.

Indian agriculture was rude, and of moderate productiveness. It was limited to garden-beds upon alluvial soils, where the climate was moist, and to irrigated garden-beds where it was dry. This kind of cultivation is the most productive in

equal areas, and with irrigation is immensely productive; but there was a drawback in the smallness of the areas that could be cultivated. The thought of subduing the forest never entered the Indian mind. To clear it was impossible without metallic implements, and field agriculture equally impossible without the horse or ox and the plough, neither of which were known to the American aborigines. They cultivated therefore only small patches of alluvial land upon the margins of rivers and lakes, and such shreds of prairie as they were able to dig over, and such bottom lands, in the dry regions, as they were able to irrigate by means of canals. But little is known of their implements for horticulture (for it was horticulture, rather than agriculture, which they practised). The Northern Indians probably used the common stone chisel, set in a handle like a pick, as a pointed instrument to break the soil; but even this is partly conjectural. A stick or a bone was the usual implement. In Mexico and Central America implements of native copper were used to some extent. Clavigero remarks that, "to hoe and dig the ground they [the Aztecs] made use of the *coatl*, which is an instrument made of copper, with a wooden handle, but different from a spade or mattock. They made use of an axe to cut trees, which was also made of copper, and was of the same form as those of modern times, except that we put the handle in the eye of the axe, whereas they put the axe into an eye of the handle." And he naively concludes: "They had several other instruments of agriculture; but the negligence of ancient writers on this subject has not left it in our power to attempt their description.* Herrera, speaking of the Village Indians of Honduras, observes that they have "also Indian wheat, and kidney beans, which they sow thrice a year; and they were wont to grub up great woods with hatchets made of flint, which all could not get before they had the use of iron. They turned up the earth with long staves that had two hooks or branches coming from them, one above and another below, to press hard with the arm and foot, as also sharp shovels; being wont to sow little, as they were very slothful and often in want, eating several sorts of roots." † Bernal

* Conquest of Mexico, II. 177.

† History of America, IV. 133.

Diaz remarks that "copper axes and working tools" were offered for sale in the markets of Mexico, but gives no particulars of them.* The implements that they used were doubtless of the simplest and rudest kind. After their garden-beds were once formed, the work of planting and cultivating them would be moderate from year to year; but the reduction of the ground in the first instance was the permanent obstacle to the use of large areas. Amongst the partially Village Indians labor was despised by the males; the cultivation, consequently, fell upon the overtaxed females. Nevertheless this class of Indians, east of the Mississippi, raised crops of corn, not large enough to save them at all times from famine, yet sufficient to sustain them in considerable numbers. In New Mexico and southward the labor of cultivation appears to have been shared more equally between the sexes, which serves to explain the greater productiveness of the horticulture of that region.

Irrigation was the favorite method of cultivation with the Village Indians. It was extensively practised in Mexico, and appears to have been the exclusive method in New Mexico. A brief explanation of the ancient method in the latter territory, where it is still practised, will assist materially to an understanding of Indian agriculture. The sites of their pueblos were usually in narrow valleys, watered by streams often of inconsiderable size. The pueblo was located upon high ground within the valley, but the garden-beds were upon the first river terrace. An acequia, or canal, commencing sometimes a mile or more above the village, was excavated deep enough to draw off a portion of the water of the river and conduct it back of the garden-beds to be irrigated, and not unfrequently one or two miles below the pueblo, where it was discharged into the river. The acequia, starting from the river, was led back to the outer margin of the valley as soon as the descent would permit, and then carried past the pueblo at such an elevation that the bottom of the canal would be higher than the garden-beds, which were laid out between the canal and the river. These canals were usually about ten feet wide at the bottom, with sloping banks, and the flowing water within them about a foot and a half deep. If the soil was loose, and the water not abundant,

* History of the Conquest of Mexico, I. 206.

the bottom was often paved with cobble-stones, or, in some cases, with flat tiles of clay.* Lots were laid off with a frontage upon the main canal, and separated from each other by dividing ridges. Each family, or group of families of related persons, had their own lot, which was private property. These lots, measured on the canal, varied from fifty to two hundred feet in width, and extended from the canal to the river, or as far as the proprietor chose to cultivate. Each lot was subdivided into garden-beds about twenty feet square, surrounded by embankments about a foot high; so that a lot sixty feet front on the canal and two hundred feet deep would contain thirty such beds. After the ground was prepared, and before the seeds were planted, a sluice was cut from the main canal to the first lot, and the several garden-beds overflowed with water to the depth of about eight inches; openings being made through the low embankments separating the several garden-beds, until the water was conducted over the entire lot. In thus irrigating it was necessary to dam the main canal, below the side cut, in order to turn the flow of water into the garden. This process was repeated from day to day, until all the garden lots of the pueblo had been submerged, and by the absorption of the water brought into a proper condition for the seeds. The same process of irrigation was repeated when the growing corn was about eight inches high; and usually a third time at a later stage of its growth, the number of times depending upon the amount of rain which might fall during the growing-season. Very large crops of corn, beans, and squashes were thus raised upon small areas; but it will be seen that it involved such an amount of labor to prepare and grade the ground as to restrict the area cultivated to a small one for each pueblo.† This simple

* There are miles of acequias now in use in New Mexico, and the remains of miles of abandoned acequias near the pueblos in ruins. Captain Johnson, U. S. A., thus speaks of a district on the Gila fifteen miles long: "The ground in view was about fifteen miles, all of which, it would seem, had been irrigated by the waters of the Gila. I also found the remains of an acequia, which followed the range of houses for miles. It had been very large." — *Reconnoissance in New Mexico, Journal Captain A. R. Johnson, Ex. Doc. No.* 41, 30*th Congress*, 1847 – 48, p. 598.

† "A mistaken idea prevails in regard to the great advantages of artificial irrigation over that of natural rains. It is true that when the cultivator can depend upon an ample supply of water at all seasons in the irrigating canals, he possesses an advantage over him who relies exclusively on nature. But the misfortune is that

but ingenious method of cultivation is the highest evidence that can be adduced of the progress made by the Village Indians in civilization.

Another method of irrigation appears to have been practised, and upon a very extended scale, by the Aztecs and their confederates in the valley of Mexico. It is a difficult and hazardous subject to touch. Few nations as small have elicited such masses of historical writing; and none have had their public affairs decorated with such wealth of imagination; yet, when it comes to a practical question as elementary as the means whereby they lived, these histories afford very little direct information. It appears that they cultivated in garden-beds, and upon a large scale, corn, beans, and pepper; that they raised cotton and tobacco; and that they had cocoa, the banana, and the maguey, the latter of which was utilized in many different ways. Provisions, such as they were, seem to have been abundant. But the support of the excessive population credited to this valley, upon the products named, in the absence of a field agriculture, would have required horticultural cultivation upon a much more extended scale than there is reason to suppose could ever have existed. The necessity of resorting to conjecture to explain the cultivation of this valley is the best evidence of the imperfect state of our knowledge. The one about to be offered must be taken for what it is worth.

In a previous article in this Review,* the writer observed that "Mexico appears to have been surrounded by shallow artificial ponds, which answered as an exterior defence. It may be conjectured that the water was held there by means of dikes and causeways, and that the supply of water was obtained by damming Lakes Xochimilco and Chalco. These lakes at present are a little less than five feet higher than the Plaza of Mexico, which, in turn, is about six feet higher than the present level of

when water is most needed the supply is the scantiest. In February and March there is always enough [in New Mexico] for the first irrigation. In April and May the quantity is much diminished; and if the rise expected to take place in the middle of May fails, there is not enough to irrigate properly all the fields prepared for it; the consequence is a partial failure of the crops." — Bartlett's *Personal Narrative*, I. 187.

* April, 1869, p. 492, note.

Lake Tezcuco. By means of dams and dikes, with both of which the Aztecs were familiar, this result might have been attained." These suggestions need further development. In the absence of any evidence that the climate of Mexico has changed since the Spanish conquest, it must be assumed that the level of Lake Tezcuco was the same then as now; less the amount of water discharged into it by the small lakes to the northward of Mexico, the outlets of which were turned out of the valley by the tunnel of Huehuetoca, constructed in the beginning of the seventeenth century. The level of the lake would vary with the relative amounts of precipitation and evaporation. Lake Tezcuco, which is now three miles east of Mexico, is thirteen miles long and nine broad. Lake Chalco is now nine miles south of Tezcuco; and Lake Xochimilco, at its west end, is five and a half miles south of Mexico. These last lakes are connected by an outlet, and together are fifteen miles long,* and discharge into Lake Tezcuco, through an outlet seven miles long, running along the borders of the present city of Mexico. At the time of the Spanish invasion, in 1519, there is no doubt that the waters of the three lakes were united by a narrow neck, and covered more than twice their present areas, and that the pueblo of Mexico was entirely surrounded by water. "The city of Mexico was then situated," says Clavigero, "as we have already said, upon a small island in Lake Tezcuco. . . . . For the convenience of passing to the mainland, there were three great causeways of earth and stone raised in the lake. That of Iztapalapan, towards the south, upwards of seven miles; that of Tlacopan, towards the west, about two miles; and that of Tepejacac, toward the north, of three miles in length; and all three so broad, that ten men on horseback could pass abreast." † And Herrera to the same effect: "Mexico, Tenochtitlan, is every way encompassed with fresh water, though thick, and, being in the lake, has only three avenues along the causeways. One of them comes from the west, about half a league in length, another from the north, a league long. On the east there is no causeway, but only canoes to come at it. The other

* Map of the Valley of Mexico, by Lieut. Hardcastle, U. S. A.; General Scott's Expedition to Mexico, 1847; President's Message and Documents, 1847–48, p. 256.

† History of Mexico, II. 359.

causeway is on the south, two leagues in length, along which Cortes and his men entered. It is to be observed that, as the Lake of Mexico stands, it seems to be but one, yet there are two, and of very different nature; for the water of one of them is brackish, bitter, naught, and neither breeds nor will bear any sort of fish, and the water of the other is fresh, and has fishes, though small. The salt ebbs and flows, more or less, according as the wind blows on it. The fresh is higher, and so runs into the salt, and not the reverse, as some have thought, through six or seven large gaps that are in the causeway that divides them, over which there are large wooden bridges. The salt lake in some places is five leagues over, and eight or ten in length, the compass of it being about fifteen. The fresh water is about the same compass." * The problem then is to explain the former presence of a lake where none now exists, with no change of climate in the interval; the lake having two sections, one of them brackish, and the other fresh. Since the lake of brackish water still remains, and has no outlet, it explains itself; but the fresh-water lake around Mexico has disappeared. Lakes Xochimilco and Chalco are also much reduced in size.

The Aztecs as cultivators were familiar with the uses of water, both for irrigation and as a solvent to assist in the reduction of land. They were also familiar with dams and canals, and constructed dikes miles in length. The marsh lands around the pueblo then, as around the city now, were not available for cultivation. A series of dams upon the outlet of the fresh-water lakes, from their mouth to Lake Tezcuco, would be the first expedient, followed by lateral dikes for the formation of ponds over the lowlands around the pueblo. These ponds would serve to irrigate the patches of higher and better land. This plan or method of irrigation, followed up for years, would finally produce the result of covering the entire region around the pueblo with water, serving as a defence also, and necessitating the construction of the great causeways as they were afterwards found. Earth and mud were thrown up on the margins of the ponds and formed into gardens, and every patch rising above the water or which could be raised by artificial means was put under cultivation. Even floats were constructed

* History of America, II. 363.

upon an extensive scale, covered with earth and mud and planted as garden-beds. They were rather a necessity of their method of cultivation, as Clavigero states, than the result of luxury and taste.* Some of the pleasure-gardens attracted the attention of the conquerors from their great size and orderly arrangement, among which were those of Istapalapan and Huaxtepec. Of the first, Clavigero observes: "It was laid out in four squares and planted with every variety of trees, the sight and scent of which gave infinite pleasure to the senses; through these squares a number of roads and paths led, some formed by fruit-bearing trees, and others by espaliers of flowering shrubs and aromatic herbs. Several canals from the lake watered it." And of the latter: "The garden of Huaxtepec was still more extensive and celebrated than the last. It was six miles in circumference, and watered by a beautiful river which crossed it." † There were fields of maize and pepper around Cholula, near Chalco, and other towns as well as near all the pueblos in the valley. Most of them appear by the accounts to have been cultivated by irrigation. "For the refreshment of their fields," says the same author, "they made use of the water of rivers and small torrents which came from the mountains, raising dams to collect them and forming canals to conduct them." ‡ There is no doubt that land was also cultivated without irrigation, but with a greater expenditure of labor in its reduction. The topographical map of Lieutenant Hardcastle shows low grounds around Mexico in the

* "Necessity and industry together taught them to form movable fields and gardens, which floated on the waters of the lake. The method which they pursued to make those and which they still practise is extremely simple. They plait and twist willows and roots of marsh plants together, which are light, but capable of supporting the earth of the garden firmly united. Upon this foundation they lay the light bushes which float on the lake, and, over all, the mud and dirt which they draw up from the bottom of the lake. Their regular figure is quadrangular; their length and breadth varies; but as far as we can judge, they are about eight perches long, not more than three in breadth, and have less than a foot of elevation above the surface of the water. They were the first fields the Mexicans owned after the foundation of Mexico; there they first cultivated the maize, great pepper, and other plants necessary for their support. In progress of time as those fields grew numerous from the industry of those people, there were among them gardens of flowers and odoriferous plants." — *History of Mexico*, II. 175.

† History of Mexico, II. 180.

‡ Ibid., II. 177.

precise areas covered by the ancient ponds. It is probable that the great square of the Aztec pueblo was lower than the present level of the plaza of Mexico; and if about two feet above the level of the ponds, there would be about two feet difference between the level of the latter and of Lake Tezcuco, which was then probably several inches higher than at present. A series of low dikes between the pueblo and Lake Tezcuco would produce this result with apparently one lake, yet in reality two, as described by Herrera, the fresh-water lake being higher and flowing insensibly into the lower.* In a short time after the Conquest the lake around Mexico had entirely disappeared. Bernal Diaz, who was writing his work in 1558, remarks: "That which was a lake is now a tract of fields of Indian corn, and so entirely altered that the natives themselves could hardly know it." † If this conjecture with respect to the formation of a great artificial pond or ponds around the pueblo of Mexico, by means of dams and dikes to hold the waters discharged by Lakes Xochimilco and Chalco and by the mountain streams, is accepted as probably true, it tends very much to raise our estimate of the intelligence and industry of the nations of the valley, as well as to bring distinctly before the mind the formidable obstacles which, in their condition, impeded their progress in civilization. The evidence which it also affords as to the great amount of labor connected with the reduction and cultivation of land by their methods, places a limit to the possible population of these areas.

Whether, at the time of the discovery of this continent, a subsistence derived from the chase, or one resting upon agriculture, was more favorable to an increase of the numbers and development of the power of the American aborigines, and whether the preponderating influence in peopling North America belonged to the Roving and partially Village Indians, or to the Village Indians proper, cannot be determined from the facts thus far presented. It will be necessary to consider the actual migrations, and to find the source whence the emigrants came, to procure the remaining facts necessary to settle

* "Around the city there were many dikes and reservoirs for collecting water when it was necessary, and within it so many canals that there was hardly a district that could not be approached by boats." — *History of Mexico*, II. 231.

† Conquest of Mexico, I. 188.

these questions. For the present it may be remarked, that the first effect of substituting agriculture in the place of a subsistence obtained from fisheries and the chase, was to break up the roving propensity by localizing the people in villages. This was a substantial advance. It is found to be nearly universally true of both divisions of the American aborigines, that nations speaking dialects of the same stock language maintained a territorial continuity with each other. This may have sprung, in part, from the influence of the bonds of kinship of language in securing mutual protection. It often resulted in confederacies. But the areas occupied by kindred nations of Village Indians were much smaller than those held by an equal number of nations of the other class. Moreover, from the direct personal nature of Indian government, each pueblo tended towards a state of independence of every other, while village life increased rather than moderated the tendency to political subdivision. This was a hindrance to progress. The inability of the Indians to rise out of the condition in which they were found was the result of the arrested growth of the idea of government. In the first place, they could not prevent the divergence of language into dialects, consequent upon geographical separation and diminished intercourse; secondly, when confederacies were formed, they were established generally too late to include all the nations of the same immediate descent; and thirdly, they were unable, with their means of subsistence, to develop population of the same descent in sufficient numbers within the folds of one confederacy to establish a formidable power. Their form of government was not adapted to overstep the barrier of diversity of language and include nations alien in speech, except as tributary, dependent, and humiliated. The idea of government is a growth through successive periods of development. It has its stages of development in barbarous society, and its after stages in civilized society, which are continuations the one of the other, and all stand together in a logical series. Its successive forms are founded upon the growth of man's experience in society. The American aborigines, as elsewhere remarked, had developed the first three stages, which belong to the period of barbarism: first, that of chief and followers, as represented by the tribe; second, that

of a council of chiefs over a number of tribes, as represented by the nation; and third, that of a great council of chiefs over several nations, represented by the confederacy. Out of this came a tendency to advance a head-chief from among the members of the council, as the executive agent of its will. For the sufficient reason that the council remained supreme,* it was rather a tendency towards, than the establishment of, an executive, a necessity of their form of government rather than a lodgement of irresponsible power in a single person. In judging of the degree of their progress, the permanent existence of a council which held the powers of government must be kept in view. For another significant reason Indian chiefs did not govern according to their sovereign pleasure: because the power of deposition, as well as of election, was held by the respective tribes. The idea of a state is essentially modern in man's history. In its perfect development it is a government of equal and impartial laws enacted by the people themselves, through representatives of their own selection. In such a state the law rules, and not the executive, not the legislature, not the magistrate. The American aborigines were very many stages below this idea of a state.

From these various considerations it may be seen why it was that the Village Indians did not rise to a supremacy over the continent by reducing the Roving Indians to contracted areas, occupying their best positions, and holding them powerless for aggression. The Aztecs were unable to carry their power a hundred miles beyond the valley of Mexico, either north, west, or east. In warfare they possessed no advantages over the barbarous nations. On the contrary, there are reasons for believing that the latter were in general superior to the Village Indians in hardihood and courage, and in warlike inclinations.

Some further evidence tending to show that the Roving and partially Village Indians took the lead in peopling North America will be found in their migrations, which will form the subject of a subsequent article.

LEWIS H. MORGAN.

* Acosta, after defining four grades of Aztec chiefs, observes that "all these four dignities were of the great council, without whose advice the king might not do anything of importance." Nat. and Mor. Hist. East and West Indies, p. 485.

Art. IV. — Civil-Service Reform.

"In the government of this Commonwealth, the legislative department shall never exercise the executive and judicial powers, or either of them; the executive shall never exercise the legislative and judicial powers, or either of them; the judicial shall never exercise the legislative and executive powers, or either of them: *to the end it may be a government of laws and not of men.*" The Massachusetts Bill of Rights, which contains this article, inimitable for grasp and conciseness, adds elsewhere the warning that among the precautions absolutely necessary for the maintenance of a free government is a frequent recurrence to the fundamental principles of the Constitution. Laying aside, therefore, the usual arguments in favor of civil-service reform,— arguments drawn from finance or from administrative convenience,— this essay will attempt to show that the soundness and vigor, nay, even the purpose of the reform movement, must depend upon its recurrence to the fundamental principles of the Constitution.

When President Grant took the oath of office, he held in his hands a greater power than any President chosen for many years past or likely to be chosen for many years to come. Turn which way he liked, it was supposed that a majority of the people was ready to lend him its support. Whatever might have been said of his abilities or character as a whole, it was still universally believed that in the two essential qualities of honesty and obstinacy he enjoyed a considerable superiority over any candidate that the country could hope to see pass the ordeal of a political caucus. If there was one quality expressed in General Grant's face, it was that of dogged resolution. If there was any moral in his career, it was to be found in the example of silent perseverance. The most careful search could not have produced out of the whole population of the United States a single man who had offered more proofs of a stubborn will, nor one from whom the public might expect a more resolute adherence to a purpose once fixed.

It was commonly supposed that the new President had determined, even before the inauguration, on his course in regard

to the civil service. His non-partisan character, his military training, his inheritance of an administrative system in which the two great parties divided the patronage, and, above all, his open and frank expressions of opinion, publicly reported and undenied, all seemed to point towards a very moderate exercise of executive power. The public, outside the ranks of the trifling proportion of citizens who are directly engaged in managing party machinery, accepted this foregone conclusion with a sense of relief and almost of joy. The press was resigned to it, and as a body was ready if not actively to support, at any rate to abstain from actively opposing the conservative tendencies of the President. A stranger who looked at the national institutions with the old assumption that the voice of the people guides the course of the government, would have thought nothing more easy than for the President to lift his administration, by a single touch, out of the mire of political corruption.

Perhaps the President himself shared in this belief. At all events, the most natural explanation of his first proceedings is to be found in some such idea. He selected a Cabinet which seemed to have but one bond of sympathy, and this one bond the common freedom from political entanglement. The wish to escape party dictation was more evident than the means of doing so were well chosen. The attempt failed, and the President yielded to political pressure so far as to make a new selection ; but even after this partial check, the Cabinet contained only one member who was distinctly a representative rather of the Republican party than of the Republican sentiment of the country.

The Cabinet once formed, it became necessary to establish a rule in regard to inferior appointments. Here too the popular expectation turned out to be well founded. Instructions were duly given to the effect that there should be no sweeping and partisan changes. Removals from office might indeed be made in cases of incompetence or misbehavior, or for reasons of economy, or even where extreme partisanship had compromised the loyalty due to the government, but no general proscription on account of political opinions was to be authorized. This was the principle laid down by the President to the mem-

bers of his Cabinet for the rule of the departments, — a principle sound, just, and popular, which deserved and in the end would probably have received universal applause.

How was it that this rule was not carried into effect? Upon whom does the blame rest that this opportunity, which was so rare and so promising, was thrown away? That the President's intentions were defeated here even more decisively than in the arrangement of the Cabinet, is only too evident, but that the blame for this defeat rests on him or on his advisers is an assumption that the public is not justified in making. However strongly one may be prejudiced against General Grant's final capitulation, it is only his due to say that he did not surrender with a good grace. No distant observer can judge fairly of the difficulties to which a President is subjected when he attempts to maintain such a position in face of the party organization which supports him. Nothing could be easier than to announce that faithful and competent servants of the government should not be disturbed, but nothing was more difficult than to maintain the promise. In the struggle which followed, the President stood alone. The great mass of his friends, who cared nothing for office or patronage, could neither see what was going forward, nor could they lend him encouragement or support. They only knew that General Grant, penned up in the White House, was surrounded by a hungry army of political adventurers whose trade was an object of popular odium or contempt.

Had the army of office-seekers marched alone against the White House, General Grant would probably have routed it, large as it was, with the utmost ease. Such men might fret him, but they would have found him a difficult instrument to play upon. They came, therefore, supported on one side by all the personal influence, on the other by all the political power, they could control, and day after day the whole phalanx flung itself upon the President. Escape was impossible. There are many things that a President cannot evade, and among the first of these is the duty of listening with patience and replying with courtesy to the leading men of his party. A senator may be tedious, ill-mannered, and a notorious rogue, but the double majesty of State and Senate speaks from his lips and commands a hearing.

Nor was it possible for the President to say that the remonstrances and the complaints of office-seekers were without foundation. The practice of removing officials, in order to appoint political or personal friends to their vacant posts, was one which custom had firmly established. Whether good or bad, it existed, and President Grant had been nominated and elected without having given any public warning that this custom was to be changed. To act upon the new rule without suitable notice was unfair to his friends; for however just the reform might be in the abstract, in practice it would be considered a refusal of confidence to individuals, and would tend to discredit them in the eyes of their constituents. A friendly appeal of this sort was difficult to resist. The applicant was perhaps a soldier, a comrade of the President, a man who had suffered in the national cause. His spokesman might be a member of Congress, a consistent Republican, and a cordial supporter of General Grant in days when his supporters were few; as a member of Congress his value might be all the greater because he came from a district which no other Republican could control, and where even he thought the executive patronage essential for his re-election. He would urge that the principle of rotation in office was a necessary element in the organization of parties; it held them together, stimulated their activity, and could not be suddenly abandoned without a shock, the only possible result of which would be that the President must lose a devoted friend in Congress in order to substitute a Democrat in his place, and this for the mere purpose of retaining Andrew Johnson's officials. Or if the President held firm against reasoning, there remained the earnest appeal to personal friendship, far more difficult to resist or evade than any weapon in the whole armory of logic. Even when this had failed to affect a muscle of the President's dogged and imperturbable features, there were expedients in reserve which might smooth away every difficulty. There are few things to which politicians will not descend, and one favorite method by which to rid themselves of their enemies, as it is the most dishonest and the most insidious, is generally the most successful. The duties of a government officer are such as very commonly make

trouble between him and the persons with whom he is obliged to come in contact, and it frequently happens that men who imagine themselves ill-treated are ready to believe, and active in spreading, any charges against a government officer whose only fault is perhaps too great activity or too sharp a tongue. To put these charges on paper is an easy task, and to obtain a list of signatures extensive enough to call for attention is not very difficult, if the affair is carefully managed. If the treasury could tell the secret history of the many attempts made, not only by the famous whiskey ring, but by the more dangerous and powerful political ring, to drive old and tried servants from the public service, no one could fail to see that even in the best times the department is often deceived and with difficulty maintains its ground against outside pressure. There seems to be no limit to the elasticity of respectable men's consciences when their interests and their pride are involved. Thus the provision that government officers shall not be removed except for cause may be practically evaded, and the President or the Secretary, wearied out by incessant annoyance, is happy at last to yield the point and to cover his conscience by the " charges " which he has never investigated.

All this, however, is but child's play. The President might perhaps have yielded to these incessant personal appeals or to the small intrigues which backed them, but he would have yielded in this case to individual influence, not to political combinations; he would have lowered his personal authority, but he would not have deserted his official trust. To show that the heart of the evil is here, and that, until reform can reach this height, reform must be imperfect and may be mischievous, it will be necessary to look back for an instant on the past history of the government.

The early administrations, from the time of Washington to the time of Jackson, were, in spite of all political differences, practically one continuous government; that is, the President, whoever he might be, stood as regarded the legislature and the political parties as merely the temporary head of a permanent executive system, which was meant to furnish, and did in fact furnish, the necessary solidity and continuity without which no government can last. The President represented,

not a party, nor even the people either in a mass or in any of its innumerable divisions, but an essential part of the frame of government; that part which was neither legislature nor judiciary; a part which in the nature of society must of necessity exist, — which in the United States was intentionally and wisely made a system by itself, in order to balance the other portions of the structure. The President might die, but the office could not be vacant. He might be sent back to private life, but his successor took up the instruments which he laid down. He might be incompetent as a British king, but the permanent system of which he represented the power and the wisdom would save him from contempt. He might be unprincipled as a French emperor, but the established courses of administration, more powerful than mere law, would hold his hand. The five early Presidents accepted and maintained this position, to their own advantage and to that of the country. Nor did President Jackson essentially change it. He introduced, it is true, the rule of punishing officials whose only duty was to the government for holding opinions which were hurtful only to himself, if they were hurtful at all; but his very attitude towards the Senate implied a high sense of his official duty, and so long as his strong hand guided the executive system it was maintained in all its power, if not in all its dignity. When he passed away, however, and a succession of weaker men assumed his place, the effects of his example were little by little drawn into service to break down this bulwark of the executive. By an unwritten law of the Constitution, which has seldom been found at fault, the nervous system of the great extra-constitutional party organizations finds its centre in the United States Senate. As the party organizations grew in development and strength, the Senate became more and more the seat of their intrigues; and when the party organizations discovered that their power would be greatly increased by controlling the executive patronage, the Senate lent all its overruling influence to effect this result, and soon became through its individual members the largest dispenser of this patronage.

This was, however, only the first step. Mr. Marcy's celebrated declaration, drawn from the sink of New York politics,

"To the victors belong the spoils," was mischievous, but it was not fatal. The President had always been in the habit of consulting friendly senators and representatives in regard to special appointments, and when he now broke down the permanence and dignity of that administrative system of which he ought to have been the champion, he only admitted individual members of the legislature to a wider influence in executive patronage than they had hitherto enjoyed. But the movement could not stop here. When it was that Congress first began to claim as a right the nominating power which it had until then held as a favor, is a question difficult to answer with exactness, but at all events the concession has been made within the last ten years. It may be safe to say, on the authority of a person well informed as to the history of times in which he has acted a great part, that the assumption by members of Congress of local patronage as a right was first conceded in principle by the first administration of Mr. Lincoln, in 1861. The earlier and notorious instance of Mr. Douglas, in his Illinois campaign, was probably exceptional, and considered as such by the President. By this concession, the executive, the great, permanent constitutional power, which Washington and Jefferson represented, and which the wisdom of our own times aims to suppress, delivered over to the legislature its independence as a co-ordinate branch of the government. Its moral weight, and its individual character as a permanent influence in the government, ruled by administrative principles and guided by conservative maxims drawn from its own history, were rudely shaken by the first blow, but its absolute power was reduced only by the second.

"If the executive power, or any considerable part of it, is left in the hands either of an aristocratical or a democratical assembly, it will corrupt the legislature as necessarily as rust corrupts iron, or as arsenic poisons the human body; and when the legislature is corrupted the people are undone." This principle, laid down by an American writer upon government before the Constitution was framed, received a striking illustration in the result of that revolution which threw the executive patronage into the hands of the legislature. Mr. Lincoln's death was the accidental cause of bringing the

evil to a head, and if any one is curious to follow the exact process by which this poison of executive power works in corrupting a legislature and a people, it is only necessary to watch what has since occurred. Since the foundation of the government there has been no scandal and no corruption which could be compared in its mischievous effects to the disgraceful bargaining for office which took place between President Johnson and the Senate. Even the men who shared in it were ashamed. No one has a word of defence for it. This attempt on the part of the legislature to exercise the executive power, has produced in Congress and in the country an indifference to strict rules of wrong and right, a contempt for personal dignity, a cynical assumption of official dishonesty, and a patient assent to the supposed necessity of corruption, which nothing but a great popular reaction can overcome.

There is no room here for moderate language or for half-way modes of thought. Men must strip from the subject all imaginary distinctions, and confront face to face the bald and disgusting fact that members of Congress cannot be honest with such a power in their hands. Even the best will consult his own interests in distributing patronage, and this means that he will convert a sacred public trust into a private property, — an act which by every known code is stigmatized as the highest of crimes. The senator who buys outright with his own money his seat in the national legislature is guilty of an act not more dishonorable to himself and far less hurtful to the public interests than that which he commits in paying for the same dignity out of the nation's means, at the expense of the nation's future good, by an appointment to office. Intrigue and venality are the necessary accompaniments of such an adjustment of powers, and unfortunately, under the American system, political corruption cannot be confined to a class. An aristocracy may indeed be corrupt without infecting the great mass of people beneath it; these may remain sound to the core, and ready to apply the remedy when the evil becomes intolerable. Such has again and again been the case in England when she seemed tottering on the verge of fall. But in America there is no such reserved force. The inevitable effect of opening a permanent and copi-

ous source of corruption in the legislature must be that the people are undone.

Thus, when General Grant came into power, the executive which had originally been organized as a permanent system with a permanent and independent existence, and a temporary head, was wholly changed in its nature. While the first five Presidents had in fact formed a continuous government, protected from encroachments by its continuous character, the last five have been the representatives of so many violent revolutions. At first it had been supposed that these revolutions were only the results of party triumphs ("I never said that the victors should plunder their own camp," is the commentary of Mr. Marcy on his own previous declaration). As such, they were excused. But this is no longer pretended. The whole executive system has become the avowed plaything of the legislature. Whatever happens, Congress has established the right to seize and overthrow the whole administration once in every four years forever. It is folly to suppose that the executive can maintain itself while such a right is conceded or even theoretically acknowledged. It is equal folly to imagine that the government itself can endure under a strain which would have broken the Roman Empire into fragments.

General Grant, therefore, whether he knew it or not, was attempting a far more serious reform than any mere improvement of the civil service implies, a reform in comparison with which the proposed saving of $100,000,000 a year to the treasury was but a trifle. The question was not whether he as an individual would make or refuse to make certain appointments, but whether he had the power to wrest the executive authority from the hands of Congress; whether he could obey or understand the meaning of his oath; whether the President was to remain where the Constitution placed him, or whether the Senate was to snatch more and more of the functions of administration, until corruption had taken so deep a root that the people in their disgust would cheer on some modern Gracchus to attempt by sedition a reform which could no longer be accomplished by law. What might have been the result of President Grant's experiment, had he persevered, is a problem

that for the present must remain unsolved. Before a week had passed it had become clear that the President's perseverance in his attempt would provoke a personal rupture with so many members of the legislature, and secret hostility in so many more, as to endanger the success of the administration.

The President gave way. Then began those cruel scenes which for months reduced the city of Washington to such a condition as is caused by an ordinary pestilence or famine. Private suffering is of small consequence where the nation is the chief sufferer. It matters little how many miserable women and worn-out men, the discarded servants of the Republic, are to be ground to death under the wheels of this slow-moving idol of faction, since their tears or agony are as little likely to save others as they are to help these in their supplications to the inexorable appointment-clerk. Therefore, if it is any consolation to the public to doubt or to hope that the private injustice done and misery caused were exaggerated, — although few persons who had occasion to be near will share their trust, — let them have the benefit of the doubt and rejoice in it. The argument can well afford to spare this poor appeal to human sympathy.

To a certain extent General Grant's administration did only what had been done by its predecessors, and what has long been familiar to the public mind. Although much has been said against the President for his selection of personal friends and relatives for office, so far as this choice had any political meaning it was rather deserving of praise and support, as the last remnant of the President's defeated purpose of rescuing the public service from the taint of political corruption. If a similar process of selection had been carried, with proper care and a wider acquaintance with men, through all the public service, one principal source of corruption, the low intrigues of partisan politicians, would have been greatly checked. In this particular, on the contrary, it was reserved for the administration of President Grant to descend lower than the worst of its predecessors in the scale of self-degradation.

The Grand Army of the Republic was not perhaps organized as a political association. Its nominal object was rather one of charity, and it is believed to have proved useful in lending its

protection or assistance to soldiers and soldiers' families in distress. As a charitable and useful society, it contains many members of the highest character, and its chief, General Logan, has done good service to the country, and deserves respect for it. But whether the original organization was intended to be political or not, it certainly plunged into politics very soon after its existence began, and by the time General Grant entered office it had already reached the lowest level of political activity. Under the pretence of clearing Rebels from the public service, it organized within the departments an elaborate system of espionage, such as the American government had never yet been degraded enough to cover with its protection. The history of every clerk, from the highest to the lowest, was ransacked to obtain evidence of his political opinions; and every one who fell under suspicion was watched, his words taken down, even his looks carefully noted. The evidence thus collected was duly reported to the proper authorities of the organization, and the officers of the Grand Army of the Republic, on the strength of this testimony, secretly acquired by means which were once thought disgraceful, then made a formal demand upon the United States government, through the heads of departments, denouncing, like Jacobins of the reign of terror, the criminals thus condemned without a hearing, and demanding their removal for the benefit of soldiers of the Grand Army.

If there is anything in the most liberal view of this action that can be made to palliate or excuse the outrage, it would be well to make it known. The government owes it to its own dignity, if not to decency, to repel the idea that it could ever have tolerated any approach to such interference with its duties, while the mere suggestion that its action could have been affected by such means is in itself so near an insult that it would not be fitting for the pages of this Review. But in order that there may be no danger of incurring the charge of exaggerating the importance of the subject, it will be well to insert here the actual form of address used by the Grand Army in communicating with the administration.

"To the Hon. . . . . .

"Secretary of . . . . .

"SIR: — We, the undersigned, a committee of the G. A. R. appointed for the purpose of examining into the political status of the employees of the . . . . Department, have the honor to present to the Honorable Secretary the accompanying lists, and respectfully ask the removal of these persons and the appointment, to fill the vacancies, of soldiers and sailors.

"Very respectfully,

". . . . . ."

Then follows the list of names, with the accompanying annotations: —

"1. Those strongly suspected of having been Rebel sympathizers.

"2. Those who made it their duty to rigidly enforce 'my policy' in word and deed.

"Those having no mark against their names are or have been recognized as Democrats until recently.

"Those marked 'doubtful' left open for further examination."

The extraordinary nature of this performance becomes doubly striking when it is remembered that "we, the undersigned," who were thus acting as a committee for "examining into the political status of the employees of the departments," and who assumed to dictate to the Secretary as to who was to be removed and who appointed, were of necessity the Secretary's own clerks!

The Treasury was the richest field for rewarding the labor of these disinterested men. Mr. Boutwell, fresh from Congress and trained in a partisan school, was the only member of the Cabinet who had thoroughly mastered the practice and principles of that species of political science which is peculiarly American, and who believed in its wisdom and necessity with all the earnestness of the New England mind. He alone, or with but one companion, turned to the work with zeal; but it would be unfair to suppose that he could lower himself so far as to lend direct support to a system so odious and so disreputable as that pursued by the Grand Army. Mr. Boutwell did not act directly upon the information furnished by the Grand Army. Instead of this, he inaugurated another inquisition of his own, by which he might test the political fidelity of

his subordinates. It is surely impossible that these two tribunals can have carried on their investigations side by side and hand in hand within the walls of the Treasury. *Non tali auxilio!* Without such an additional humiliation, it is enough to know that under this double terror the whole moral tone of the department gave way. Every clerk distrusted his neighbor, and the air of the Treasury, which in ordinary times is not altogether pure, now seemed heavy with the whispers of delators. The new administration began its career by creating or encouraging in its service the same system of spies and secret denunciation which is usually charged as the crowning disgrace of an absolute despotism. To palliate it by alleging its narrow field of action is absurd. It not only existed, but its single fault was found to be its too great efficiency. In more than one case the denounced and removed official proved to have been as good and true a Republican as the Secretary himself, no matter how narrow the creed; and before the work was completed, it was commonly understood at Washington that both Mr. Boutwell and his appointment-clerk had expressed themselves as profoundly disappointed and disgusted with the mistakes which they had made.

While these events were taking place in the Treasury building, the city of Washington was filled with adventurers in search of office. Senators and members stood aghast at the work they were expected to do; but they did it. Almost every department of the executive patronage was swept clean; and although there may be a question whether the new appointments were as a whole better or worse than the old, there can be no doubt that they were not made for any purpose of improving the service, but were for the most part the same gross political jobs that have for so many years stamped the character of American politics. Yet although the Treasury with its vast power was entirely in the hands of the plunderers, and the Post-Office seemed to follow the Treasury, the resistance to political dictation was still vigorously maintained in other departments of the government, where men of another temper were in control. Several of the Secretaries preserved their trust with courage and dignity, but among all the members of

the Cabinet the most remarkable contrast to the pliability of Mr. Boutwell was furnished by the dogged obstinacy of the Attorney-General. Accident had brought side by side in President Grant's Cabinet two men who might naturally have been supposed to hold the same political ideas. They both came from the same Congressional district; they had for years belonged to the same political party; there was no jealousy to divide them; both were sincere, honest, and capable. Yet one was the type of that narrow political morality which has obtained so general a control of America, — the product of caucuses and party promotion; the other was by birth and by training a representative of the best New England school, holding his moral rules on the sole authority of his own conscience, indifferent to opposition whether in or out of his party, obstinate to excess, and keenly alive to the weaknesses in which he did not share. Judge Hoar belonged in fact to a class of men who had been gradually driven from politics, but whom it is the hope of reformers to restore. Mr. Boutwell belonged to the class which has excluded its rival, but which has failed to fill with equal dignity the place it has usurped. At the outset of the administration the essential difference in the characters of these two men was brought out in lively contrast. While Mr. Boutwell distributed his offices with liberal hands to senators and representatives, Grand Armies and State delegations, the Attorney-General sat silently at his desk, and glared through his spectacles with a sort of grim humor at the man who dared ask him to perpetrate a political job. While Mr. Boutwell, buttonholed in corners, was listening with approval to the account of some assessor's entire unfitness for the Republicans of Ohio or Minnesota, Judge Hoar had reached the somewhat absurd determination that not even his bedridden messenger should be removed, although the Attorney-General should be reduced to running his own errands. The men who attempted to lead the Attorney-General came away from his office with a low opinion of his intelligence, which they expressed with somewhat excusable intemperance both in public and private. They complained that he did not "see things," where his real offence was in seeing far too much; and they added that his temper was unpleasantly irritable, and his obstinacy that of a

mule. Much allowance is to be made for politicians in such a position, and it is possibly true that the Attorney-General may have occasionally allowed his wit or his temper to express his thoughts with impolitic freedom. He had not been placed in that office in order to provide for politicians, and he certainly carried out this negative purpose. The removals and appointments which a proper regard for the public service required were made with little reference to personal preferences. Among other posts, the New York marshalship, usually considered as an important item in senatorial patronage, was for once given unsought and unexpected to a man who was by no means calculated to serve the ordinary ends of New York politicians. Such reckless indifference to the claims of party managers was naturally followed by a liberal distribution of personal abuse, which must be the inevitable lot of any public man who holds that his duty to the government is higher than his duty to factions among the people or in the legislature; and the public may confidently expect that the persevering attempts to drive Judge Hoar from the Cabinet, from which his approaching retirement is so regularly announced by the officious agents of the press, will end only when their object is accomplished.

Notwithstanding the resistance of this portion of the Cabinet, it is still true that the administration of President Grant as a whole will be considered as having carried the principle of rotation in office and submission to external interference in executive powers to a point beyond anything that had been reached before. The claim of members of the legislature to control the local and even the general appointments for which the President and the President alone ought to be held responsible has not been met by any sufficient assertion of the executive dignity, and is now so deeply rooted in custom that few members of the legislature can at once succeed in grasping the idea that no corresponding right exists. One of the characteristic stories told of the Attorney-General represents him as bewildering some delegation that recommended a certain appointment by the simple reply that he did not think the public service required a change of the incumbent. The bewilderment of the gentlemen was due to the fact that this recommendation happened to

be the unanimous act of an entire State delegation in Congress, and it seemed impossible that the executive could assert a higher duty to itself than it owed to an entire State delegation. But even the partial independence which the executive is still allowed, an independence commonly gained by balancing one congressional influence against another, works evil rather than good. It is one of the unfortunate but inevitable results of the situation that the better class of politicians on whom a President ought to rely, men of dignity and self-respect, will not lower themselves to this struggle for patronage. Their suggestions or wishes once expressed and met by refusal or neglect, they retire, offended and mortified, but too proud to beg for favors. Not so with the baser type of professional politicians. These are never wearied and never absent. Day and night they weave their web round the President and his advisers. Some intriguer, who has made his way to eminence by means of the skill with which he has managed the tools of political corruption in a State where even before his time political corruption had become an art that few could master; who by the meanness of his policy and the pliancy of his character had fairly broken the back of his party, which at its last gasp made itself a stepping-stone to pass him safely into the Senate, and then sank into hopeless impotence; some such man, thus sent to Washington to pursue there the same grovelling and selfish policy which had already brought a great party into contempt on the narrower field of State politics, allows few things to stand in the way of his determination to control the tremendous patronage which the government holds in his constituency. One repulse does not affect him. The government may at first disregard his remonstrances and scarcely conceal its contempt for his opinions; but sooner or later his persistence and his skill conquer a foothold, and he stands before the country the dispenser of Federal patronage, while, just as surely "as rust corrupts iron or as arsenic poisons the human body," his advice and his presence enfeeble and pervert the tone and energy of the administration.

This difficulty of dividing responsibility between the executive and the legislature is one which is too serious to exist long. The country has now arrived at a point where it must

either go back or go forward. The great executive authority established by the Constitution as the counterpoise of the great legislative authority has gradually abandoned, first, that character as a permanent and regular system which served as the defence of weak Presidents; secondly, the right of nomination to executive offices which belong within the constituencies of members of the legislature; and finally, it only remains to adopt a measure formally urged in the last session of Congress, by which the entire patronage of the executive may be allotted between the several States in *pro rata* proportions, and then the legislature will have grasped the whole executive power, leaving in its place only the empty honor of a name.

The experience of the present government has shown that even a President so determined in character and so strong in popular support as General Grant shrank from the attempt to reform the civil service as one which was beyond his powers. Not only has this opportunity been lost, — an opportunity which may never occur again, — but the Republican party by its action in this case seems to have shut the door to reform. Had General Grant succeeded in carrying out his original purpose, public opinion might have been roused to enforce the precedent on future administrations; but it is difficult to understand how any Republican member of Congress can now propose a measure of reform, which, if worth consideration at all, must, by securing the permanence of present office-holders, practically jockey any future administration out of its power; and it is equally difficult to see why any future Democratic President should consider himself bound by such a law. Nothing remains but to act outside of all party organizations, and to appeal with all the earnestness that the emergency requires, not to Congress nor to the President, but to the people, to return to the first principles of the government, and to shut off forever this source of corruption in the state.

If there were any reason to suppose that a deep-laid scheme existed on the part of any member or members of the legisture to usurp the government, there might indeed be some reason to despair; but in fact the danger is at present due rather to the indifference of the better senators and to their natural and proper spirit of common pride in the dignity of

their House, than to any far-sighted policy. It is not Congress that has betrayed the executive, but a long line of Presidents who have failed to respect their trust. And as the evil is due, not so much to Congress as to the Presidents, so the remedy must be sought, not in any arbitrary legislation, but in the creation of such a sound public opinion as will hold future Presidents more closely to their charge. Supported by such an aroused public feeling, the President will certainly act with success. It is not merely his right, but his duty, to originate any reform in the civil service which may seem to him useful or necessary; and if he understands the meaning of an oath, he is bound to carry out such a reform in spite of all resistance. Every President, even though steeped from his cradle in an atmosphere of county politics, must still feel, on assuming his office, some part of that permanent responsibility which weighs upon the executive chair no matter who may be its occupant. The outward forms of royalty, the symbols of that dignity which attaches not to the person but to the office, are not allowed to republican rulers, but the great administrative system over which the accident of a birth has placed one man, and the still greater accident of a popular caucus has placed another, demands of both the same submission and sacrifice of selfish purposes, and gives to both the same sense of deep responsibility. No ruler will intentionally betray this trust. The system is too vast for one weak man to overthrow. He may indeed betray the people who have trusted him, but he will do his best to defend or increase the powers of his office. He cannot entirely pervert the great system behind him into a personal property. He must be controlled and guided by it, even more than it can be controlled by him. If its machinery is clogged, he is the sufferer; if mistakes are committed, he is responsible; if violence is at hand, his life is the forfeit. Of the thirty-six million people in the United States, the President is the one most interested in the regular working of the administrative system.

The President therefore, be he who he may, must be expected to prefer for his service the old and educated servants of the government, and to exercise, or at least wish to exercise, some discretion in his appointments. Arguing from general

principles, it is safe to assume that the President does as a rule attempt, though of late years more and more feebly, to resist the dictation of politicians within the range of his official duties. With a sympathetic public behind him, the President may commonly be depended upon to institute and to maintain such reforms as experience has proved to be necessary. Even of late years the executive has shown examples of its capacity for originating, and of its persistence in urging, its ideas of reform, such as only need application on a wider field in order to carry every measure that reformers demand.

The history of the struggle made by the State Department to improve its consular service throws a flood of light, not only upon the difficulties that stand in the way of reform, but upon the manner in which alone they can be properly met. There are probably few persons in the United States who are aware that any such attempt has ever been made by the government, or who have the least idea whether it has succeeded or whether it has failed. It will therefore be interesting to tell the story, so far as it can be disinterred from congressional debates and executive documents.

In 1853, Mr. Everett, when Secretary of State to President Fillmore, negotiated with the government of France a consular convention, which was then thought to be the most successful model for that especial class of treaty that had yet been framed. Among the articles of the convention was one by which the existence of consular pupils was formally recognized as a part of the system in both countries. No such office, however, existed in the American service, and the department appears to have framed or accepted the article only with the intention of availing itself at some future time of this expedient for quietly improving its foreign corps of officers. Mr. Everett, having signed the treaty, almost immediately quitted office, and was succeeded by Mr. Marcy under the presidency of Mr. Pierce.

Nothing was done by Mr. Marcy either in 1853 or in the following year, nor even when in 1855 the necessity of revising the entire consular system had compelled Congress to pass a very elaborate act for the purpose. But in 1856 it was found that this act of 1855 was itself incomplete, and required a supplementary law, which was duly prepared in committee after

much consultation with the department, and the original draft, furnished by the department to the committee, contained a clause authorizing the President to appoint twenty-five consular pupils with salaries of $1,000 a year, first having subjected them to a proper examination to secure their fitness for the post. Mr. Marcy had asked for seventy-five, but the committee cut the number down by two thirds, and the department acquiesced, having by its urgency succeeded in convincing the committee of the material advantages to be gained by the new agents thus created. Late in the session the bill was introduced into Congress and passed without debate by common agreement, probably no member outside of the committee ever having taken the trouble to read it.

Mr. Marcy instantly issued elaborate instructions regulating the standard of qualification, and the process to be followed in examining candidates, and he promised somewhat too hastily that deserving pupils should be recommended to the President from time to time for promotion to vacant consulates. Unfortunately Congress had made no special appropriation for these pupils, and before Mr. Marcy could make any actual appointment it was necessary to wait for the appropriations of the following year. Accordingly, when Congress met in December, the Appropriation Bill contained the little item: "For consular pupils, $25,000." No sooner had the House in committee reached this paragraph than it burst into a fit of temper. The Committee of Ways and Means attempted feebly to defend it, but General Quitman, of Mississippi, after stating that consuls were diplomats, and that the best diplomacy was the diplomacy of the backwoods, the honest diplomacy of republican freemen, not that which was taught in the diplomatic schools of Europe, threatened to propose by way of amendment an appropriation for establishing a professorship of diplomacy in the Department of State. This idea, in itself not altogether unworthy of consideration, seemed to settle the doubts of the House. The appropriation was struck out with scarcely a dissentient vote, and the Republican majority for once congratulated itself and its Democratic friends upon an agreement of opinion.

The bill next went to the Senate Committee on Finance, of

which Mr. R. M. T. Hunter, of Virginia, was chairman. In the mean while Mr. Marcy had heard of the action taken by the House, and was not prepared to abandon his scheme so easily. He wrote a long letter to Mr. Hunter, urging him to restore the appropriation, and stating with much force the arguments in its favor. Mr. Hunter acceded to his wish, and the bill was reported to the Senate with the item replaced. Debate instantly rose on this point, and continued at some length. Curiously enough, Mr. Fessenden took the lead in opposition, on the ground, first, that the project was impracticable, owing to the want of permanence in our system of government; and, secondly, that it would merely enable the President to cause his friends' sons to be educated abroad. Mr. Collamer suggested — and his suggestion was met by the laughter of the Senate — that the next step might be to educate a President; a notion which might perhaps please the public better than it would suit the ambition of senators. But it was reserved for Mr. Hale, of New Hampshire, to state the true ground of objection in a manner which admits of no response.

"I am opposed to this policy entirely," said Mr. Hale. "I am opposed to it, not because I think our consuls are educated too highly as a general fact, but I dislike this way of doing it. If we begin here, where is it to stop? We shall have then to appoint pupils for ambassadors, and, when you begin that, there is no ending."

There is little satisfaction in striking at a fallen man, and Mr. Hale is now fallen so low that an assailant must stoop far to reach him. It would be pleasanter now to pass him by and abstain from pointing a moral at his expense; but in this case Mr. Hale was the representative of a class which must be struck wherever it can be reached, by every legitimate weapon, until it is beaten into insignificance, or the hope of reform may be abandoned at the outset. In the light of subsequent history there is a bitterness of satire in these words of Mr. Hale, that Juvenal might have envied. What was it to Mr. Hale whether ambassadors were to be educated or not? Was it that such a condition would shut the door to him and his like? If by any such provision the country could have been spared the degradation which has been inflicted upon it by the conduct

of men like Mr. Hale as its representatives, there can be no stronger argument for its instant adoption.

Mr. Rusk, of Texas, was of the opinion that the President already had patronage enough, and that this appropriation was made in the interest of politicians to increase it. This objection was ingenious, but it showed either that Mr. Rusk was deeply skilled in the least straightforward practices of European diplomacy, or that his political knowledge was not such as to fit him for the high office of senator. The true secret of opposition to this measure, and to all similar measures which aim at restoring permanence to the public service, is the fear indicated by Mr. Hale that the President will then have fewer offices to divide among members of Congress. The political purity of Mr. Rusk and Mr. Hale stood out in brilliant relief on these two conflicting backgrounds.

In spite of the exertions of the two Virginia senators, when the vote was taken twenty-five senators recorded themselves against the measure, while only eleven could be found to support it. Side by side in the majority stand the names of Brown of Mississippi and Collamer of Vermont, of Fessenden of Maine and Fitzpatrick of Alabama, of Foot of Vermont and Iverson of Georgia, of Hale and of Mallory, of Toombs and of Trumbull, of Wade, of Wilson, and of Yulee. The list alone shows that no common principle could have directed the vote, and the result will show whether the honest men or the rogues had reason to be best pleased with such a coalition. Among the minority were Messrs. Bayard, Hunter, Mason, Pugh, Toucey, and — most significant of all — Cass.

Not yet satisfied with his triumph, Mr. Rusk immediately offered an amendment repealing the clause in the bill of 1856, by which the President was authorized to appoint the consular pupils whose pay had so quickly been stopped. It was indeed unusual to introduce such legislation in an appropriation bill, but Mr. Brown justified this step on the ground that "this lubberly Congress," as he was pleased to call the body in which he took a somewhat prominent part, would not stop to pass an independent measure; and all the Republicans present supported the amendment, which was intended to put an end forever to the obstinate attempt of the government to

provide the nation with a better service. The clause was accordingly repealed by a vote of twenty-one to fourteen.

According to modern theories of the United States government, this signal discomfiture should have stopped further discussion, and the executive should have rested content with such a consular service as Congress was disposed to maintain. The President, it is true, has sworn faithfully to execute the laws, but he never meant in earnest to fulfil his pledge. Congress makes and Congress executes the laws. The President is but the instrument of the legislature. Mr. Marcy, whose name has sheltered from contempt the political maxim which has brought the executive so low, made in this instance an attempt to repair in part the injury he had helped to inflict, and found that it was easier to degrade than to elevate. With one hand he had overthrown the government; with the other he attempted only to restore an insignificant corner of it, and he failed so utterly as to leave the matter in a worse condition than if he had attempted nothing at all. Fifty years ago the whole administrative service was permanent; yet in 1856 even such a man as Mr. Fessenden could say that the permanence of twenty-five consular clerks was contrary to the spirit of the government, and the public would have believed him if it had cared enough about the subject ever to read the debate. Nevertheless, though Congress had in effect sharply reproved the executive, though Mr. Marcy was compelled to abandon forever his hope of undoing some slight portion of the mischief he had helped to cause, and though Mr. Fessenden sneered at the notion of permanence and technical education in the civil service, yet the Department of State, vindicating its rights as a permanent executive power which was intended to guide the President as well as to be guided by him, and thus by its experience and knowledge to give character and solidity to the government, refused to accept the result as final, and persevered in its project of reform.

Mr. Marcy retired from office in March, 1857, and was succeeded by Secretary Cass. Within less than twelve months, Mr. Cass renewed the effort to obtain these consular pupils. A question of salary was involved in the matter, and compli-

cated it to some extent. This formed a side-issue which had nothing to do with the principle involved. It was perhaps easier both for the Secretary to press, and for Congress to resist, the proposed change when it was presented merely as an increase of salary to a half-starved race of officials who in most cases were incompetent to do their work, than when it came in the form of a direct question of educating public servants. In every point of view, however, the department continued to urge the reform. One letter of Secretary Cass bears date the 25th January, 1858, another the 11th May of the same year, and the correspondence forms an executive document printed for the use of the House in 1859. Yet Secretary Cass went out of office in 1861, and the department had not then succeeded in gaining the slightest concession from Congress.

Mr. Seward next appeared upon the stage. He took possession of the department in March, 1861, and during the next year was probably not less busied with his duties than Mr. Cass and Mr. Marcy had been with theirs. It was not likely that a small administrative matter such as this would seem to Mr. Seward to require attention at a time when the national existence depended on his success. Yet, before the year 1862 was over, Congress again received the inevitable document urging the creation of consular pupils. Ten years had now passed since Mr. Everett's first step, and the department had thus far, in spite of all its obstinacy, failed to make the smallest progress; nor was it more successful in 1862. Congress paid no more attention to Mr. Seward than it had paid to Mr. Cass, and the year 1863 passed by without a sign.

In those days, however, Mr. Seward had power, and knew how to overcome an obstacle. By the close of 1863 the department had discovered the way to work with effect. Instead of wasting argument on the House of Representatives, Mr. Seward turned his efforts to the Senate, and when the usual recommendation on behalf of the consular pupils was made by the department to the committees, the Senate Committee had been so thoroughly canvassed that it at last adopted an amendment to the Appropriation Bill as sent up from the House, and, by restoring the old law of 1856, again brought the whole subject up for discussion in Congress. The debate

that followed was in a somewhat different tone from that of 1856. Either senators had made a stride in advance, or they had given place to new men. Mr. Hunter, Mr. Mason, and Mr. Pugh, the supporters of Secretary Marcy, had vanished, as well as Mr. Rusk, Mr. Hale, Mr. Brown, and the rest, his opponents. Nevertheless, Mr. Fessenden and Mr. Collamer, Mr. Trumbull, Mr. Wade, and Mr. Wilson, were still there, allowing ample means for determining whether it was the time that had changed, or only the men.

In point of fact only one man seems to have changed, but by good fortune this one man was Senator Fessenden. His committee had reported the amendment; and when the amendment came on for debate, he met the attack of Mr. Collamer with a frank avowal which was likely to carry sympathy wherever it was read. He spoke at once of the old bill of 1856, and of the opposition which compelled its repeal: "The great and leading consideration for its repeal was that Congress did not believe the thing would be of a permanent character. . . . . Upon deliberation I have changed my views, and I am willing to admit that I have changed my views. . . . . I have a hope that the intelligence of the country will bring it and is fast bringing it to the conclusion that, if we can find men who are competent and educated to the business of attending to our commercial affairs abroad without being politicians and partisans, their services will be recognized by any administration that may come into power, for the benefit of the government itself, and that where they have distinguished themselves they will take in these important places the places themselves, and be able to render us vastly better services than we have as yet received from any quarter." To this appeal, Mr. Sumner added the most energetic support, and between them, these two Senators and their committees made successful head against the attacks of Mr. Collamer and Mr. Reverdy Johnson, Mr. John Sherman and Mr. Grimes. The consular pupils were restored by a vote of twenty to sixteen, — Messrs. Trumbull and Wilson following Mr. Fessenden, while Mr. Wade remained true to his old vote.

The amended bill then went back to the House, where an earnest attempt was made to procure its passage, but the

House again took the bit in its teeth and kicked viciously at the consular pupils. The most characteristic argument against them was made by Mr. Brooks of New York. "True," said he, "there are but twenty-five consular pupils named in this bill, but these twenty-five are but a nest-egg of a vast system which in the end will be imposed upon the whole diplomatic system of this country. . . . . I should look upon it as a great calamity, a great misfortune to this country, if we should be represented abroad in high places by consular pupils, by men who have been twenty or thirty years from their country. It is necessary for every young man to come home within five or ten years and free himself of the courtly associations and despotic modes of European thinking, to breathe once more the spirit of our free institutions." This argument was probably suited to a certain class of congressmen, although personally Mr. Brooks is much too clever to allow his own eyes to be blinded by the dust which he throws in the faces of honest countrymen. Even he allowed, however, that after the short vacation, or purge, of the republican consul, his country might again employ him to advantage. But this argument of Mr. Brooks, even though he never believed a word of it, is certainly one of the most curious instances of the want of self-respect in American society that has ever been displayed. The utter contempt and hatred for European governments which is the common stock-in-trade of American demagogues would logically result in the conclusion that, if the American government is not a humbug, the citizen who remained longest abroad would be the truest to his own land. It is the foreign despot who should fear the spirit of free institutions, not the free institutions which should be harmed by the odious spectacle of foreign despotism; yet it has never been alleged that Napoleon or his brother emperors have feared the contact of free American opinion on their consuls and diplomats, or would have cared what the result might be, so long as their service was improved. The argument made by Mr. Brooks was a cowardly acknowledgment of distrust of democratic society. Had he said in so many words that the American citizen had no love of country and could not be trusted with the charge of himself without running a great risk of learning to hate free-

dom, he would not have expressed the idea in clearer language. This indeed would be the only possible logical ground for retaining the present consular system; but even this would scarcely apply to consuls and diplomats in countries like the South American republics, unless the citizen of the United States in his misery loves any foreign soil better than his own.

The House, however, sustained Mr. Brooks and non-concurred in the amendment. The Senate insisted; a committee of conference was appointed, and a compromise was reached, — a compromise of so curious a nature that it is calculated to make its authors somewhat ridiculous. On the one hand, a certain number of men opposed the consular pupils because they were to be made a means of improving the service by promotion, and to gratify these opponents the bill was changed in such a manner as to authorize "clerks," but on no account to admit the notion of "pupils." In order to diminish still further the dangers which this formidable array of twenty-five clerks threatened to the national liberties, their number was reduced to thirteen. On the other hand, a certain amount of opposition had been roused by the precisely opposite idea that perhaps, after all, these clerks might not be permanent, and to conciliate this class of members a clause was added providing against removal except for cause. Thus improved, the bill was passed,* and the department, after eleven years' perseverance, obtained as a result thirteen consular clerks.

Nevertheless, to the department consular pupils they were, and such they were sure to remain. Nothing is more curious, in this long contest, than to notice how incessantly the depart-

* "The President is hereby authorized . . . . to appoint consular clerks, not exceeding thirteen in number at any one time, who shall be citizens of the United States, and over eighteen years of age at the time of their appointment, and shall be entitled to compensation for their services respectively at a rate, not exceeding one thousand dollars per annum, to be determined by the President; and to assign such clerks, from time to time, to such consulates and with such duties as he shall direct; and before the appointment of any such clerk shall be made, it shall be satisfactorily shown to the Secretary of State, after due examination and report by an examining board, that the applicant is qualified and fit for the duties to which he shall be assigned; and such report shall be laid before the President. And no clerk so appointed shall be removed from office, except for cause stated in writing, which shall be submitted to Congress at the session first following such removal."

ment returned to this idea of pupils, — an idea to which it seemed to cling with a kind of dogged and hopeless desperation, — and how persistently Congress set it aside. Mr. Everett, Mr. Marcy, Mr. Cass, Mr. Seward, one after another, in their vain efforts to benefit the national service begged and implored for pupils. Congress declared in reply that it would create what other offices it saw fit, but pupils they should not have. With the exception of Mr. Sumner and a few others, no members of the legislature dared even to argue in favor of pupils. The argument whenever possible was pressed on different ground. Thus it resulted that when Congress, fairly wearied out, flung its dozen clerks to the department, the department caught at them with great satisfaction, but at once proceeded to make them pupils after its own heart. Mr. Marcy's instructions for pupils were at once revived. Mr. Seward had indeed reminded the Senate in a long and very interesting letter, written to affect the result, that the foreign service still boasted of men who had served for twenty, thirty, and forty years, and whom the department had always succeeded in protecting against all political influence. He avowed his wish to educate new men to take their places, and he intended to effect his object in the best way he might. The consular clerks therefore were, now as before, not clerks, but pupils, in the view of the department, the act of Congress to the contrary notwithstanding.

This expedient answered its purpose admirably so long as it was only necessary for the department to act for itself. The appropriation was this time secured. One by one, candidates appeared at considerable intervals, were formally examined, passed, commissioned, and assigned to consuls abroad. The system worked eminently well. The pupils, so-called clerks, were useful, and their usefulness grew continually greater. Some of them were young men of parts and promise. One in particular passed a highly creditable examination, which attracted the attention of the department. He was assigned to an important consulate, and his reports were marked by so much ability that the President soon sent in his name to the Senate for promotion to the consulship itself. It is perhaps best not to attempt to penetrate the mysteries of an executive

session, nor to seek any further explanation for the Senate's action on appointments than such as the long story just told may be thought to indicate. In the language of the Massachusetts Bill of Rights, the legislative department has learned to exercise executive powers, and the government is one of men and not of laws. No senator would protect the consular clerk, and the Senate rejected the nomination.

Whatever may have been the immediate cause of this rejection, it was not such as to discourage the department. Within a short time another consular clerk was nominated to a vacant consulate, and to him the Senate appears to have offered no opposition. He was confirmed, and the department was so well pleased with its success that it quickly sent in a third and a fourth nomination of the same nature, both of which were duly confirmed by the Senate. Thus, at the close of the last administration, the department had actually made a considerable advance towards its darling object, the improvement of the service. Eleven permanent consular clerks were distributed over the world, and three more had already been promoted to consulates. The experiment had fully answered every expectation, and the system was at last firmly established.

Nevertheless, the department was not yet destined to pass beyond the range of disappointments. Another trial of its patience and endurance was now at hand, — a contingency foreseen by Mr. Fessenden, and strangely pressed by many persons as a ground for discouraging any attempt at reform. A new administration came into power, welcomed by the public as a vindictive enemy of all political jobbery and corruption. The story of this disastrous time has already been told. Few disinterested spectators of the outrages then committed under cover of blind power are ever likely to look back upon that experience without a certain warmth of indignation and contempt which seems to require some personal object to vent itself upon; but in this instance there seems to be no reason for accusing any individual of intentional wrong-doing; or if any one was to blame the secret is hid in official places, where it cannot be reached. All that the Register shows is that the department succeeded in protecting only one of its promoted pupils; the other two, although no complaint appears to have

been made either against their efficiency or their loyalty, were removed, and their places filled in the old manner. If these were not corrupt political jobs, the department may consider itself as more than usually fortunate.

After more than fifteen years of perseverance, however, which has hitherto proved successful, it is unlikely that the department will be discouraged by any ordinary chance. Unless it is crushed outright by the legislature, it will still do its best to serve the public honestly and efficiently, and in this attempt it will receive the support of the best senators. Nor is this statement true of only one department. The story of these consular pupils has been told to show that the executive as a governing influence must and does feel the burden of its responsibility, and that no President, even though he is selected by politicians to act as their tool, can ever entirely forget or betray the trust which a power far beyond the politicians has placed in his hands. If the President is weak, it is merely because public opinion is silent and support is not to be found. Arouse this, and there will then be no danger that the President will prove indifferent to the duty of protecting the purity of his administration, or that politicians within Congress or elsewhere will assume an authority which belongs not to a man nor to any body of men, but to the laws alone.

The final propositions which must stand as the basis of any permanent reform may now be gathered together, and summed up in a single sentence: The system of government in the United States has suffered a radical change; the executive, held by weak hands, has thrown away first its shield and then its sword, first its permanence and then its power, until it has been reduced so low that even General Grant, the most resolute and the most popular of Presidents, has recoiled from the task of raising it. As a necessary consequence of a weakened executive, Congress has seized and now claims as its right the most important executive powers. In exercising these powers, the legislature has, in obedience to a principle well understood by students of the science of government, converted a high public trust into an instrument of private gain, — a crime which, in morals if not in law, deserves the punish-

ment attached to a felony, and justly causes, and has already brought about, a forfeiture of public confidence. As a necessary result of a weakened executive and a corrupted legislature, party organizations have become the tools of personal intrigue; public offices serving as the bribes by which a few men purchase personal support at the nation's expense. Even the remotest local politics have been perverted by this curse, and beyond the limit of political activity the evil extends ultimately to the relations of man to man, degrading and corrupting society itself.

If the conclusions insisted on in these pages are in any way correct, the whole subject of civil-service reform is reduced to a single principle, — the same which is asserted in the thirtieth article of the Massachusetts Bill of Rights. Tested by this touchstone, all mere experiment, all novel legislation like that suggested by Mr. Jenckes, however excellent in purpose, must be held wrong both in principle and in detail, calculated to aggravate rather than to check the evil. So far as the legislature is concerned, there is but one rule to follow. Let Congress keep its hands off executive powers. Let it not undertake to interfere by any mandatory legislation in matters which are beyond its sphere, unless indeed it is disposed to make solicitation for office, either directly or indirectly, a penal offence. Let it imitate the example of the British Parliament, which, omnipotent as it is, respects the principles of government so far that it wisely contents itself with advising or approving competition in the civil service, but has never ventured to legislate upon it. The President already possesses all the law he needs, all the law which Jefferson or Madison required. The executive system should not depend on the legislature for the character of its service. Two separate powers should not be blindly confused. If Congress can give, Congress can take away, and as a necessary result an act of Congress may forbid the President to exercise powers which are essential to the executive office, and confer them upon a creature of the legislature. The executive cannot with safety lean on this treacherous staff of legislative enactments.

No doubt a great burden of responsibility is thus thrown upon the President; and if Presidents betray the trust which

the people repose in them, and, knowing what should be done, refuse to do it; if they consider their great office as merely that of a servant to the legislature, and not that of a guardian to the public interests; if they find their arms too weak to hold up the authority they have sworn to maintain, or if they decide to place their own ease before their official duty,— reform will indeed become more difficult, although still not desperate. With a President equal to his post, who understood and accepted his responsibilities and trusted to the deep public sympathy which seldom fails a bold and honest leader, the struggle would be comparatively short. Such a President might restore the executive to its early dignity, might elevate the tone and morals of the legislature, might redeem the character of party organizations, might purify even local politics; he might, if competitive examinations are the panacea for every evil, extend a network of them over every office, down to the Treasury porters, and establish his reforms so firmly in the minds of the people that the Republic would never again be in danger on this score; finally, he might revive the fainting hopes of honest men, giving to the government many years of renewed life, and, what is better still, a few years of high example: but such a President is to be prayed for rather than expected.

Be this as it may, the true policy of reformers is to trust neither to Presidents nor to senators, but appeal directly to the people. Whatever troubles distract the state, public opinion is first responsible either for creating or tolerating them. Whenever public opinion has once declared itself in favor of civil-service reform, and against the corrupt use of patronage by politicians, the evil will cease; nor need any anxiety be thrown away in regard to resistance by the Senate, since such factious opposition would only give to the people the opportunity of striking at the agents of corruption, an opportunity which may one day be used with effect so soon as old political issues can be finally disposed of. But before this time arrives, the public must be convinced that reform is a vital question, that the evils and dangers are real, and not mere inventions of a lively fancy. To effect this there is no way but to attack corruption in all its holes, to drag it before the public eye, to dissect it and hold the diseased members up to popular disgust, to give the nation's

conscience no rest nor peace until mere vehemence of passion overcomes the sluggish self-complacency of the public mind.

To build by slow degrees this deep foundation of moral conviction, to erect upon it a comprehensive and solid structure of reform, and to bequeath the result to posterity as a work not inferior in quality to that of the Republic's founders, is an aim high enough to satisfy the ambition of one generation. Such a movement must necessarily be slow. It is scarcely worth while even to pretend a hope that anything can be at once accomplished, least of all in Congress. The few members of the legislature who are conscious of their own shortcomings, and the still smaller number who would honestly aid in restoring a better tone to the government and to politics, are united by no common bond of sympathy, and have neither a name nor even a power of combination. Time alone, and the steady increase of corruption, can bring them so close together as to act with any purpose or vigor. Yet if there is one of them who feels in earnest the evils for which many are ready enough to profess a theoretical antipathy, he may by a comparatively simple expedient effect everything that can or need be effected by legislative action. Without in any way interfering with Mr. Jenckes's bill, — a measure too cumbrous for the weak reforming influence in Congress to put in motion, — let him move, and press to a debate and a vote, two concise resolutions: one, recommending the President to extend the principle of competitive examinations to all branches of the service in which it might in his opinion be usefully applied; the other, declaring the opinion of Congress that, in respect to removals from office, the executive should return to the early practice of the government. Whenever Congress can be brought to assert these two principles, it will be time enough for the public to discuss the details of reform.

Henry Brooks Adams.

Art. V. — The Coast of Egypt and the Suez Canal.

It is with the consent of Professor Peirce, the Superintendent of the Coast Survey, that I offer, in advance of an official report, selections from notes compiled in a recent professional visit to Egypt. I have been moved to do this by the thought that at this time, when public interest is somewhat drawn to the subject of the Suez Canal by the approach of the date of its formal opening, the leading features of this great work, set forth, however crudely, by one who has made a regular inspection of it, under authority from M. Lesseps, may be of interest to the general reader. The construction of this canal has added some new features to our knowledge of the geography of Egypt, and opens anew the problems presented in the physical history of the delta of the Nile.

Lower Egypt, "the gift of the Nile," has been regarded by most authorities, ancient and modern, as a territory reclaimed from a gulf or arm of the Mediterranean Sea, and not as a deposit superimposed upon the sands of the desert.*

The manner in which the sediments of rivers reclaim territory from the sea differs according to the degree of exposure at the embouchures. If the river empties into a great basin, the mud elevates the bottom of the latter pretty uniformly over a large area; but if it empties into the ocean, the waves break up the outflow, and cause an abrupt deposit, so that only the lightest material — that which is mechanically mixed with the river water, rendering it turbid — actually escapes into the sea.† In the first case the displacement is caused by a nearly vertical accumulation, and in the second by a horizontal encroachment. The Alabama discharges itself at the head of a sheltered bay, and we find for many miles beyond the uncer-

* Herodotus, Book II., repeats this theory, which he learned of the priests of Egypt; and recent authors, like Dolomien and L. Elie de Beaumont, accept it fully. Sir Gardner Wilkinson takes the opposite view.

† For the character of deep-sea deposits, see "Law of Deposit of the Flood-Tide," by Lieutenant Charles H. Davis. Smithsonian Contributions, 1851.

tain shore-line of its delta a submerged bank of mud.* The Ganges and the Mississippi, on the other hand, push out long moles of earth against the waves of the sea.† The history of the harbor of Greytown illustrates both of these conditions. Formerly it was an exposed bend in the coast, at the head of which the San Juan River made a bold delta. By the gradual advance of Point Arenas this bend took the form of a bight, and finally became a lagoon. It was not, however, until the shelter from the waves was made complete, that a general elevation of the bottom of the basin commenced.‡

Exposed deltas are usually bordered by sands — the residuum from the long-continued *sifting* action of the waves. These sands, in tideless seas, usually form an apron which is scarcely interrupted by navigable channels. The delta of the Danube offers an example of this class. In seas subject to considerable tides, the bordering sands are broken into slender banks, between which navigable channels occur. The Ganges and Burrampooter construct, at the head of the Bay of Bengal, the most remarkable delta of the latter class. The Mississippi delta, visited by a small diurnal tide, holds a somewhat intermediate position between these two classes, and advances its mud so rapidly upon the sea that the sand is not thoroughly disintegrated from other deposits. The Nile delta belongs to the tideless class. In view of its very slow progress, and of the exposure of its coast to prevailing winds from the north, the sands along its border, and the sand-bars at the mouths of the river, seem to offer no anomalies.

The accomplished L. Elie de Beaumont evidently entertains the notion that the sandy border of Egypt is a formation antecedent to the river delta; that it was a "*cordon littoral*," separating a gulf or lagoon from the Mediterranean, within the shelter of which the Nile has made a *homogeneous deposit of mud.* He says, indeed, that he believes the present outlets of the Nile

* The rivers of China distribute their mud over the bed of the shallow and sheltered Yellow Sea without forming visible deltas.

† I am informed by Major-General Humphreys, that the Mississippi bars advance after the manner of submerged dunes; by the rolling of grains of sand up a long rear slope and down a steep fore slope.

‡ For the first complete history of the formation of a lagoon, see "Report of the Committee of the National Academy on Greytown Harbor, Nicaragua." 1866.

are the first that have ever discharged their waters directly upon the sea. He cites the testimony of classical history to strengthen this statement, as showing that none of the seven ancient branches of the Nile sensibly emptied directly upon the sea; but that their waters reached the Mediterranean only after traversing the lagoons. When we consider that these lagoons, so vast in superficial area, are but thin sheets of water, whose beds lie but little below the level of the sea, the testimony loses its significance. No one, looking from a physical point of view at a chart of the Bay of Bengal, could say that the shore-line of the Sunderbunds is the boundary of the delta of the Ganges. On the contrary, he would point to the bold extremities of the great submerged moles of sand and say, "Here the river suddenly enters the sea," — more than twenty miles below its "*sensible*" mouths.

The littoral sandy cordon is a physical feature which Beaumont discusses at length in his descriptions of various countries, and he everywhere regards it as due to external causes, — to the waves and currents which abrade the projections of the coast, and drive the sands across the indentures of the shore. Many *hooks*, bights, and even lagoons have fallen under my own observation, which I know to have been formed in this manner. The instance of Sandy Hook is one in point. It is rapidly extending, under the action of the waves, which deposit at its extremity material torn from the New Jersey coast in the neighborhood of Long Branch. The case of Greytown, which I have already referred to, is similar and more perfect. But the sandy shore of Egypt does not appear to me to belong to this class of phenomena. I see no reason to believe that it existed before the outflows of the Nile, or that it has been formed under the action of external forces. Its form, curving outward from the general trend of the coast, indicates, not the action of the waves in front, but of a force in the rear. Upon our own coast we find the slender "littoral cordons" which separate lagoons from the ocean gradually moving in towards the continent; and, in the instances I have cited, of Sandy Hook and Greytown, the drifts of sand have been bent inward as they advanced. It is difficult to conceive of any external forces which could have formed a convex coast like that of the Nile

delta. In digging the canal through the beach at Port Saïd the pure sand was found to be but a superficial border. At about seventeen feet below the mean level of the sea (which is about the limit of wave action) a material is found apparently corresponding with that excavated, further on, from Lake Menzaleh.

I fall back, then, upon the primitive idea, which every one entertains on first looking upon a map of Egypt; viz., that a bank of mud has projected itself upon the sea. I have been confirmed in this view by an inquiry into which I have been led by my surprise at finding in all the authorities upon Egypt a statement that Cape Bourlos, midway between the present outlets of the Nile, is the most advanced point of the delta, — which it certainly is not. Its geographical position — more seaward and in higher latitude than the adjacent coast — has led to this error; but if we look at this shore as *a creation of the Nile* we are undeceived. We discover that the coast forms very nearly the arc of a circle of which the delta is a sector; that Cape Bourlos is not as distant from the centre as the present mouths of the river; and that the waters of the Nile are performing longer journeys to reach the sea by the Rosetta and Damietta outlets than by any other routes we could project within the sector.*

Is it unreasonable to suppose that the Nile has changed its outlets whenever these have become so prolonged as to present great resistance to its floods, and that before the occupation of the country by dike-builders the river was in some degree free to seek the shortest route to the sea, especially in periods of inundation? The conclusion is forced upon my mind that, in ages past, the coast-line, while slowly advancing upon the sea, must, in its general sweep, have oscillated about the arc of a circle, of which the centre was somewhere in the main artery of the great floods.

My search for this central point led to a curious result. I took a string and pencil, and described upon Linant's chart successive circles, continually altering the position of my centre and the length of my radius, till I was satisfied that I had

* One of the Greek authorities cited by Rawlinson describes Egypt as shaped like a battle-axe. The Arabs call it *Er Rif*, the pear.

plotted the arc which best conformed to the general sweep of the coast from the Tower of the Arabs to Peluse. Watching my arc, I had not perceived in what direction I had been shifting my centre, but now, lifting my finger to mark the point, I discovered beneath it the Pyramids of Gizeh! Subsequently I plotted the Great Pyramid upon the recent coast-chart of the Suez Canal Company, and found my previous result confirmed.* Situated upon the last rock that confines the floods of the Nile, this structure occupies a more important physical position than any other artificial object upon the face of the earth, since it is the centre from which radiated the waters of the river, and from which, from age to age, the coast may be supposed to have advanced in concentric arcs. With no predisposition to believe in the scientific purposes of the pyramid-builders, I nevertheless cannot help thinking that, if there ever existed a comprehensive and economical system of irrigation in Lower Egypt, this initial point must have been to the engineer one of primary importance.†

To return to the subject under discussion, I must remark finally that the hypothesis of a pre-existing sheltered bay or grand lagoon is not necessary to explain the absence of sands upon the delta, since these sands do exist in great masses to bear witness of the past. About eighteen miles north of Cairo, surrounded by fertile lands, there is a pair of "sand islands,"

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* The latitude of the Great Pyramid (the more important element for this) was not long ago carefully re-determined by Professor Smyth, Royal Astronomer of Scotland. The longitude I took from Linant. I required my circles, as I drew them, to touch the outer rocks (contemporaneous formations) at Alexandria and Abou-Kir; to clear Cape Bourlos (which has, according to Beaumont, slightly retrograded under the action of the sea), and to fall in with the shore at Peluse, where the beach under the action of waves from the westward has advanced fifteen hundred feet since the days of Strabo, — i. e. since the closing of the ancient Pelusic and Tanitic branches. Although my arc is over one hundred degrees, I do not pretend to distinguish between the Great Pyramid and its immediate neighbors of the same group.

† Since writing the above, I have discovered the following passage in Girard (of the French expedition): "The coast of Egypt, from Alexandria to Peluse, presents a great curve, turning its convexity to the north, upon which the point of Abou-Kir and the two outlets of the Nile are salients. Precisely in the middle of the distance which separates them (the outlets) we find Cape Bourlos, the most northern point of Egypt, situated upon the same meridian as the pyramids." Except the allusion to Abou-Kir, this is correct.

each of which has an area of several square miles.* These islands are elliptical in form, with major axes lying respectively north-northeast and north. Between them there is a strait of arable land about as broad as the Nile. Again, about thirty miles north of Cairo, between the two arms of the Nile, but much nearer the Damietta, occurs another pair of islands of more eccentric forms than those previously mentioned, but of nearly the same area. The strait between these (having a course north-northwest) is broad enough for the main river, and is occupied by a slender branch of it. If I produce the axes of the two straits I have mentioned, they meet in the broad portion of the Nile just above the bifurcation.† These traces of ancient water-ways lie near the head of the delta, where the velocity of the outflow must have been very much greater than at the present outlets. It is for this reason, probably, that we find the straits, as I have called them, radiating from a point in the main stem of the Nile. This lends support to the theory that there was no pre-existing desert, because dunes of such elevation, if anterior to the outflow of the river, would have deflected the streams from their free course.

Sir Gardner Wilkinson observed the sands in the deposits of the Nile, but he says, "As marine productions have not been met with in boring to the depth of forty feet in the delta, it is evident that its soil was deposited from the very first on a space already above the level of the Mediterranean." ‡ This is a very curious statement. The borings must have been confined to a very small space near the head of the delta, because it is no exaggeration to say, that of the soil of Lower Egypt not covered by dunes not one-eighth part is elevated forty feet above the reach of the sea, nor one half of it ten feet. Dr. Clot-Bey, who spent the larger part of his life in Egypt, not only states explicitly that the Nile bears sand along its bed all the way to the sea, but that beneath the fertile soil of the delta petrifactions of marine animals are found.§ The Nile has so

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* *Île de sable au milieu des terres*" is the designation upon the Canal Company's map of the Isthmus (1866).

† In the *Batn-el-Baquarah* (cow's belly).

‡ Rawlinson's Herodotus.

§ *Aperçu Général sur l'Égypte.*

often shifted its course through Lower Egypt, that it may have replaced by new deposits much of the original soil, and for great depths. In this way also the finer sands of the underlying sea-bed may have been swept to the front. It is probable that the desert, before its emergence from the sea, was a horizontal plane like the Bahama Banks. If the relative elevations of land and sea were altered twenty-four feet by the uplifting of the former, the Bahama Banks would expose many thousands of square miles of surface sensibly level, and still in the midst of this area would appear gulfs not unlike the Red Sea, except that they would be much deeper and have bolder fore shores.

I have entered into this long discussion because, although there are evidences that Lower Egypt has been, in great part, reclaimed from the sea, it is highly improbable that there was originally in its place a narrow gulf, as Herodotus concluded, like that at Suez, and especially that this gulf was protected by a sandy cordon as Beaumont supposes. Whether we take for measure the very slow advance of the shore-line of the delta upon the Mediterranean, or the vertical accumulation upon the borders of the Nile, we are carried back to a very remote period, — perhaps as far as the naturalist would be who should examine the shells strewn here and there over the adjacent desert sands. But if the ancient portion of the delta was formed during the period of general emergence, a change of regimen has occurred, for this uplifting ceased many thousand years ago. The traces of high and low water levels in the basins of the Lacs Amers, which have been essentially dry through the entire historical period, and the beds of shells along their shores, correspond in vertical position with the similar phenomena renewed daily upon the Red Sea at Suez.*

* Some of the shells which I picked up were as fresh and unbroken as those cast upon our shores by last winter's storm, and the ridges caused by the wash of high and low waters — familiar objects of study to me — gave the same range of tide that is now observed in the Red Sea at Suez. Here is the testimony of thousands of years to be counted for nothing in the geological chronology, for no change has occurred to mark this lapse of time. The solemn impression of the death-like immobility of nature that I received in this desert I afterwards recalled, as I witnessed an eruption of Vesuvius and felt the earth convulsed beneath my feet.

The portion of the delta shore lying west of Abou-Kir has a rocky border, at some points elevated twenty feet. I recognized it as a range of calcareous dunes consolidated. But six months before I had examined a similar formation in progress on Salt Key, in the Bahamas, where the dust of shells ground up by the sea is blown into dunes, and subsequently converted into compact rock. To the east of Abou-Kir the shore is sandy, and generally low, like the north shore of the Gulf of Mexico.

The sands of the Egyptian beaches are remarkably fine, and in this respect unlike those of littoral cordons, where all but the coarsest sands are sifted out by the sea, — and quite unlike the desert sands, which are of all sizes from large pebbles downwards. No one who compares these sands with those of other coasts can doubt that they have been transported by a more gentle agent than the waves of the sea, or can fail to conclude that they have been swept down by the river along its bed.

The Mediterranean, although sometimes very rough, and often an uneasy sea, is not, like the Atlantic, traversed continually by a long roll or "ground swell." The waves on the coast of Egypt are short and sharp, and the breaker upon the shore is generally of short reach. There is not that great advance and recoil which we observe in the seas that roar along our shores. In the neighborhood of Port Saïd I noticed that the sand along the water-line was beaten down quite hard, — as I have often observed it along our inside beaches, — and not like the sands of ocean shores. As winds from the northwest prevail, and as the greater body of water lies in that direction, the prevailing set of the sea is also from that quarter, and the movement of the sands of the coast is toward the east. The easterly current which prevails all along the southern portion of the Mediterranean does not, as far as my observation goes, possess scouring power affecting the shore-line.

To the west of Abou-Kir there seems to be little sand travelling along the rocky shore, but to the east, beyond the river mouths, the amount is considerable. Cape Bourlos yields a little to the wear of the sea, and during floods the bars

of the Rosetta and Damietta give way, and distribute part of their sands along the shore. It has been observed at Port Saïd that the sands arrested by the west mole accumulate more rapidly immediately after the river floods. The circumstantial evidence is strongly in favor of regarding the Nile as the direct or indirect source of the sands upon the Egyptian coast. The very careful observations which have been made upon the Mississippi show that in the earthy matter travelling upon the river bed a considerable portion of sand appears, and that as this matter approaches the sea the proportion of sand to aluminous earth increases, so that at the outer bars, where the sifting action of the waves is fully experienced, the material is almost wholly sand.*

I have spoken of the Egyptian coast as somewhat approaching in form the arc of a circle. If, within this, I draw a concentric arc at a distance of about twenty-one miles, I enclose between the two the lagoon district of the delta. In this district the average elevation of the soil due to the deposit of the Nile is about that of the Mediterranean Sea. Of course I do not include the drifts of sand blown back from the coast. The lagoons themselves, although conspicuous features upon a topographical map, are really very slight depressions below the sea level, and therefore have no physical significance in a study of the coast. In the beds of old river-courses channel-ways are still found traversing these lagoons which are deep enough for small craft in the dry season.

It is remarkable that, notwithstanding the abundance of marine *débris* along the route of the canal, it has not yet been shown that the Red Sea and Mediterranean were ever connected. The distinct fauna of the two seas have been followed to points within a dozen miles of each other, but are nowhere found mingled.† As the two seas preserve at the present time nearly the same mean level, it is evident that no open passage could now be maintained by natural scour, since the alternating north and south currents caused by the tides would be equal and opposite.

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* See Report of Humphrey and Abbot on the Mississippi River, p. 446, and Appendix, p. x.

† Testimony of M. Laurent, cited in *L'Isthme de Suez*, August, 1868.

To any one who has followed the discussions of Halley and others upon the phenomena of the Mediterranean, and has been convinced that the inflow at the Straits of Gibraltar is requisite to supply the loss sustained by evaporation, I offer the problem of the Red Sea, lying among thirsty deserts in the tropics, with scarcely any fresh water supply either from rivers or rains, with nearly the same level as the Mediterranean, and with no inflow at Bab-el-Mandeb to indicate that it is lower than the Indian Ocean. The recently perfected levellings across the French Empire show that the Mediterranean at Marseilles is three and a quarter feet below the Atlantic at Brest.*

I offer the suggestion that upon the open sea-coast the observed mean level must be higher than the true level of the ocean, because the swell from the ocean is always moving shoreward, and on reaching shallow ground has a real motion of *translation*, so that water is accumulated upon the coast; and because the winds which most affect the elevation of the water along the coast are those which blow from seaward, and these also accumulate the water. The sea is sheltered from land winds, especially in the shallow zone along the shore where their effect would otherwise be greatest. The Atlantic coast of Europe is a lee shore through the greater part of the year, and perhaps the difference of level between its waters and those of the Mediterranean may be wholly or in part due to the littoral accumulations I have described. It is evident that the Atlantic generally is not higher than the Polar Sea, the Pacific and the Indian Oceans, because permanent currents set southward from Baffin's Bay, eastward round Cape Horn and westward round the Cape of Good Hope.

That the comparative densities of different partially enclosed seas may be seen, I offer the following table of specific gravities: —

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* *Cours de Travaux maritimes, professé par M. Chevallier, Ingénieur-en-chef de Ponts et Chaussées.* Of course we cannot conceive of a slope as great as three feet and a quarter in the Straits of Gibraltar, since the permanent inflowing current (deducting the tide) is only two to three miles per hour. The Red Sea is actually a few inches higher than the Mediterranean: perhaps the *total* slope through the Suez Canal will be as great as that through the Straits of Gibraltar. It is generally believed that a counter-current exists below the surface of the Straits, but the evidence of this is not of a good kind. The same notion prevailed relative to the Gulf Stream in the Strait of Florida till my observations disproved it.

Red Sea	1.0308	(Suez Canal Engineers.)
Mediterranean . . .	1.026 to 1.029	*
North Atlantic . . .	1.0265 to 1.0288	†
Yellow Sea	1.023	
White Sea	1.019	
Baltic Sea	1.015	
Black Sea	1.014	

It will be observed that the Red Sea heads the list. I will mention, before quitting this subject, that recent inquiries indicate a slight decrease of salts for great depths in the ocean.

Not only through the Straits of Gibraltar, but all along the African coast far into the Levant, runs an easterly current, which is described as having sometimes a velocity of three or four knots off the coast of Egypt. ‡ In the immediate neighborhood of Port Saïd the observations taken since the canal was commenced, which I inspected, showed only occasional velocities as high as one knot, — the mean scarcely exceeding half a knot. Easterly winds, when violent, reverse the stream all the way to the Atlantic.

Although the coast of Egypt is low, with little to distinguish the land-fall, it has but few outlying shoals. There are no dangers beyond the general sweep of the twelve-fathom curve, which is nowhere more than ten miles from shore. The fifty-fathom curve lies but six miles off Alexandria, fifteen miles off the mouth of the Rosetta, twenty-one miles off Cape Bourlos, and twenty-one miles off the mouth of the Damietta. The lead is therefore a safe and indispensable guide to the navigator. The Egyptian Government is about to place first-class lights at Abou-Kir, at Cape Bourlos, at the mouth of the Damietta, and at the extremity of the great mole at Port Saïd.

The winds upon the coast of Egypt are principally from the northwest quadrant from the middle of May to the middle of October. They are variable in November, but in December and January winds from the southwest quadrant predominate.

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* The smaller quantity is from observations by the Suez Canal engineers. The larger from Dr. Marcet. (Phil. Trans., 1819.)

† The smaller quantity is from my own observations in mid-ocean, the larger from Dr. Marcet. Those that follow are all from Dr. Marcet.

‡ *Considérations Générales sur la Mer Méditerranée, par A. le Gras.* I presume hese estimates are exaggerated.

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In February the winds are again variable, while in March and April the northeast quadrant yields the prevailing winds. I have arranged in the table which follows the number of days in the year in which the wind blows from sixteen points of the compass at Port Saïd; and I have added, for comparison, the results from Ismaïlia, in the middle of the Isthmus, and from Suez, on the Red Sea.

Direction.	Calm.	N.	NNW.	NW.	WNW.	W.	WSW.	SW.	SSW.	S.	SSE.	SE.	ESE.	E.	ENE.	NE.	NNE.
Port Saïd	$10\frac{1}{2}$	$63\frac{1}{2}$	$30\frac{1}{2}$	69	$14\frac{1}{2}$	29	$10\frac{1}{2}$	36	$8\frac{1}{2}$	14	$4\frac{1}{2}$	9	$1\frac{1}{2}$	$10\frac{1}{2}$	5	34	$14\frac{1}{2}$
Ismaïlia	$4\frac{1}{4}$	$141\frac{2}{3}$	$38\frac{1}{6}$	$28\frac{1}{6}$	$24\frac{1}{3}$	$37\frac{1}{3}$	$3\frac{1}{4}$	$3\frac{5}{6}$	$3\frac{1}{12}$	$2\frac{1}{3}$	$3\frac{1}{2}$	$2\frac{1}{4}$	$3\frac{5}{6}$	$5\frac{3}{4}$	$6\frac{1}{2}$	9	47
Suez	82	$66\frac{2}{3}$	$79\frac{1}{4}$	$80\frac{1}{2}$	$3\frac{1}{4}$	10	$3\frac{5}{6}$	9	$3\frac{5}{6}$	$12\frac{1}{12}$	$2\frac{1}{4}$	$1\frac{5}{6}$	$0\frac{1}{6}$	$0\frac{2}{3}$	$0\frac{1}{3}$	$2\frac{3}{4}$	$6\frac{1}{6}$

The Ship Canal, connecting the Mediterranean by an open channel with the Red Sea, is eighty-seven and a half nautical miles in length, with an average width exceeding three hundred feet, and a minimum depth of twenty-six feet below the mean level of the sea.* It follows a slightly winding course through the greatest natural depressions of the desert from Port Saïd, upon the east flank of the Nile Delta, to the roadstead of Suez. The original design of crossing the Isthmus at its narrowest section was abandoned, because of the shallow water found in the projected approach from the Mediterranean; but the distance along the present route is only about ten per cent greater than it would have been if the northern entrance had been fixed at Peluse, as was first proposed. About midway between the two seas the Ship Canal is met by a fresh-water canal from the Nile, and beyond this the two run along within sight of each other as far as the harbor of Suez.

The aspect of the country may be described in a word, — it is a *desert* in the extreme signification of the term. Its shallow lagoons, its flint-covered plains, its travelling dunes, and its ancient sea basins belong to and complete its desert character. It is not totally devoid of vegetation; here and there a lonely tamarisk, magnified by the mirage, meets the eye of the traveller, but this only serves to give effect to the scene of desolation about him.

* I use nautical miles (6,086 feet) whenever not otherwise stated.

The climate is healthy and agreeable. Although the sands heat up occasionally to 130° Fahrenheit, the extreme summer temperature of the air in the shade does not exceed that of Boston, reaching 95° at Ismaïlia last August. The summer temperature at the central station just named has a mean of 81°, the autumn of 67°, the winter of 59°, and the spring of 72°. The summer nights are cool, and there is nearly always a refreshing breeze. The heat of summer days brings with it no lassitude, for the air is still invigorating and delightful to breathe. Sunstrokes occur among those who refuse to wear proper covering, but the turban, or a woollen shawl thrown over the head and shoulders, is an effectual protection.

There were twenty-seven rainy days at Ismaïlia in 1868, and the total rain-fall was one inch and a quarter for the whole of last year. At Port Saïd there is more rain and at Suez less.

It is only in March and April that the khamseen may be expected upon the Isthmus. The word "khamseen" signifies fifty, — the liability to this southerly wind being limited to fifty days, but it rarely lasts more than twenty-four hours at a time. When this wind blows from the southeast it brings with it sulphurous fumes, which are very oppressive, causing at times ophthalmia, cephalalgia, and dysentery, together with depression of spirits. The brutes are affected by it as well as man, and the grain wilts, as described in Pharaoh's dream. Happily the poisonous khamseen rarely lasts beyond sunset.

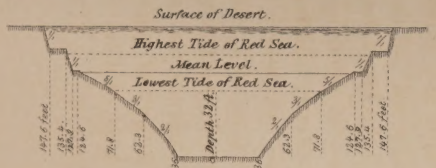
The harbor of Port Saïd is altogether artificial, there having been no natural protection for vessels here whatever. It consists of two basins, one lying outside and the other inside of the natural shore-line, the former protected by moles, the latter excavated in the sandy border of Lake Menzaleh.

The moles of the outer port are of unequal length and of very unequal importance. The western, which may be regarded as the windward mole, stretches out nearly at right angles to the original shore-line for a distance of 7,150 feet, then, deflecting to the eastward about twelve degrees, runs on 1,050 feet, to the twenty-six-feet curve of soundings as originally found. Ultimately this mole is to receive a further extension of 2,300 feet. Its general direction is northwest, and, as we have seen, its total length will be about two statute miles. The eastern mole

SUEZ CANAL

Section at the Barrier of Chalouf

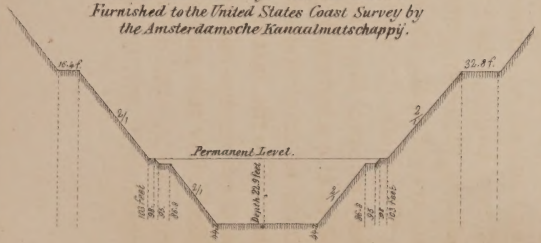
Furnished to the United States Coast Survey by the Compagnie Universelle.



AMSTERDAM CANAL

Section *through the* Dunes

Furnished to the United States Coast Survey by the Amsterdamsche Kanaalmatschappij.



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is straight, and its course inclines towards the shoreward portion of the western mole about twenty-five degrees. Its direction is nearly north and its length is very nearly one statute mile. That the length of these moles may be appreciated, I give a tabular statement of other similar works designed to break the force of the sea.*

	Length in Feet.	Shelter in Acres.
Cherbourg Breakwater, 45 feet water	12,300	3,000
Holyhead, north pier	7,300	371
Portland, isolated breakwater	6,000	2,099
Plymouth (Eng.) "	5,248	1,853
Rochelle	4,482	
Aurigny	3,280	
Jersey, 2 moles	2,476	235
Dover (original design 10,591 feet)	1,800	
Venice, marble mole	4,600	
Marseilles (not finished), 52 feet of water	26,240	
Leghorn, isolated mole	3,700	
Genoa, new mole	3,900	
Algiers	2,500	221
Lion Bay (South Africa), 48 feet of water	26,240	
Palma (Majorca)	3,550	
Amsterdam, Canal Port, 2 moles, projected, each	5,050	247
Delaware Breakwater and Ice-breaker	4,014	640
Buffalo, Lake Erie	1,452	
Alexander's mole at Tyre	3,500	

I could not learn what precise rules were followed at Port Saïd in the projection of the moles. It is obvious that the greater length and crooked course of the western is designed to cover the entrance from the northwest quadrant, but I do not comprehend why the main entrance to the inner basin should have been placed near this mole so as to have twenty degrees' rake of sea from the northeast. At the very time when a blow from the northeast makes the outer harbor unsafe, an escape to the inner harbor may be a dangerous experiment. It is, however, very rare that this outer basin is rendered even uncomfortable by storms. I have observed dredging-machines at work there during pretty strong northeast winds, and they did not seem to experience much trouble with their scows, etc.

Of the experience with the sands thus far I can speak with some confidence, as I was permitted to examine the several

* I omit piers designed simply to control the outflows of streams, some of which are, however, of great magnitude.

hydrographic surveys that have been made, and to compare them, make tracings, etc.

The long mole, by arresting the material travelling along the coast from the west, has caused a creeping out of the shore-line on the windward side. The space thus reclaimed is of triangular form, with an area of 378,000 square yards, and represents a filling of 622,000 cubic yards, for the eight years ending July, 1868. It is probable that this shore will advance till it reaches the end of the mole, and then the sands will sweep into or across the anchorage. To remove the amount of material thus annually brought in according to our figures would scarcely employ a good dredging-machine a single month in a sheltered spot; but beyond the harbor's mouth the work would assume a more serious character, and perhaps exceed in expense the farther extension of the mole.

Between March, 1860, and July, 1868, the advance of shore near the mole amounted to 1,213 linear feet, of which 350 feet was accomplished during the last eighteen months, and 88 feet during the last six months. During the last three years the advance has been in parallel bands, and it is evident, from the increase of base and depth, that the accumulation goes on in an increasing ratio. It is true that the amount for the final six months, to which we have referred, seems to decline a little, but Mr. Ritt (acting Director-General) informed me that in the other six months of the year a greater deposit might be looked for, because, according to his observation, the amount is greater after the season of flood, or during the last half of the year. This gentleman considers the Nile to be the source of these sands, and attributes them mainly to the outflow from Gemileh, the ancient Mendesian mouth of the river, six miles west of Port Saïd. If the shore-line continues to advance at anything like its recent rate, the dry land will extend to the extremity of the mole in about forty years. This visible extension of the shore does not, of course, represent all the filling that is going on, since there is maintained beneath the water a gentle slope, the foot of which is a long way out. In the results of studies of the submerged contours I do not feel much confidence, because experience has taught me to expect many unreal changes in comparing surveys made by different parties. I

shall, however, give the most general and decided results that I have reached.

As the mole has been extended, there has been a tendency to deepen on the windward side near its extremity, but the hollow has been again filled up as the building continued. Accumulations have followed the mole, but have not appeared seaward of it, although considerable agitation of the more distant contours is unmistakable; and I think I am correct in stating that the amount of deposit under water is small in comparison with that represented by the advance of the shore-line, of which I have given the measurements. Between the surveys of 1860 and 1865, I consider the four fathoms' contour to have been unaffected by the mole. In the following year this contour was disturbed, as the mole neared the original three-fathom curve; and in 1867, although the mole did not reach a greater depth than three and a half fathoms at the time of the survey, the contours beyond were affected certainly as far out as the five-fathom curve. I conclude from these changes that the sands are agitated in deep water by the interruption which the mole offers to the waves and currents, and that practically it is impossible to carry the mole out to firm and unchangeable bottom.

Thus far I have spoken only of the accumulations to the windward of the great mole, which threaten the harbor; but I must now call attention to real injuries which have already occurred in the harbor itself from inroads of sand. I have already referred to the deepening which appears on the windward side of the great mole near its extremity, due to the *race* of the sea and coast current. Some of the material thus scoured away has been carried into the harbor, where it rests under the lee of the mole. It is probable that the amount of material thus supplied while the mole has been advancing will lessen now that the work is closed, because the *race* is now permanent in position instead of being, as heretofore, carried out into new ground continually. Moreover, the eastward deflection of the extremity of the mole seems to have a good effect in compelling the sands to dissipate themselves seaward.

Another and much more serious trouble has arisen from the driving of sands through the interstices of the mole itself.

These have actually destroyed the larger part of the channel first executed under the lee, so that the work has had to be done over in a new direction, and a portion of the harbor space abandoned. The full amount of deposits from this source I could not ascertain.

Both of the moles at Port Saïd are built for the most part of rectangular blocks of artificial stone, each over thirteen cubic yards in volume, and as these blocks are deposited *pell-mell* (I use the term technically) there occur, of course, large spaces between them, through which the fine sand is borne with each dash of the sea. In their haste to obtain the security and quiet which the shipping requires, the company omitted, in building this mole, the precautions usually taken. In pell-mell or *rip-rap* breakwaters (as they are sometimes called in this country), the English mingle different sizes of stones, so as to make the structure tight; the French attain the same end by first making a core of small stones and finally throwing over a covering of heavier ones. It is difficult to decide between the advantages offered by these two methods respectively. One may easily see that the English method consumes the greater mass of materials at the outset, and that by the wash of the sea a considerable waste must occur from the dropping out of all the small stuff that may be exposed. On the other hand, the voids being, theoretically, in a greater ratio to the mass in the French system, greater sinkage might be expected as the stones, grinding upon each other, lose their edges and angles. In practical experience, however, the sinkage, under similar circumstances of foundation and exposure, is found to be the same in both systems, and the final proportion of voids about twenty-eight per cent.*

The shore at Port Saïd is peculiarly favorable for construction in fascines, and I am convinced that jetties, like those just completed at the proposed new embouchure of the Meuse, would have been entirely successful. It is true that Egypt

* The method of building moles by tumbling blocks of stone into the sea is probably as old as maritime commerce. The Tyrians employed it long before Alexander's time, and traces of their work still exist to bear witness — albeit rather obscurely — to their skill and knowledge. The use of artificial blocks of stone dates back to the time of Vitruvius.

supplies little material for this kind of work; but in view of the loss which the company has sustained in repeated excavations, and in the permanent reduction of its mooring-space in the outer port, there can be little doubt that a saving could have been effected by the use of fascines, even if the material had been brought from a considerable distance.*

The tendency towards an accumulation of sand to windward is very much more favorable than the opposite tendency towards an encroachment of the sea, which is usually presented in the case of moles resting upon the shore. I conceive, however, that here, as at some other places where moles have been built, a direction might have been chosen for the structure that would have involved neither accumulation nor excavation, — the constructive and destructive tendencies being placed in equilibrium. The driving of sand through the mole does not excite anxiety among the engineers of the canal, because they conceive that it will cease as soon as a narrow strip of dry sand has formed under the lee, and that this narrow bank, being protected from the wash of the sea, will preserve a steep fore slope. I should fear, however, that in storms of great violence the sea would run up the low shore outside, spring over the breakwater, fall with violence upon the strip of beach, and spread the sands out over the channel. Again, I should fear that northeast seas, attacking the fore slope of this bank, would

* Upon the sandy shore of the German Ocean, the Dutch are building two remarkable harbors, in situations similar to Port Saïd, although more exposed to violent seas. One of these is the proposed new embouchure of the Meuse, and is to be the advance port of Rotterdam; the other is at the entrance to the new Amsterdam Canal. The former, built with fascines, has thus far withstood the sea better than the latter, the moles of which are built of beton blocks laid according to the system adopted at Dover, Spithead, and Plymouth. In comparing the two works, last year, I was struck with the absence of all trace of injury to the fascine work, and the very serious injury that the beton mole had sustained. The moving sands accumulate among fascines, and, by thus adding weight, give the structure great power of resistance when attacked by storm waves. Moreover, the flexible and rugged border of the fascine enables it to break up the wave, and thus consume its *vis viva*. The smooth beton block, on the other hand, not only fails to arrest the sands, but, offering a sudden obstacle to the wave, either starts from its foundation upon sudden attack, or, turning the sea, is undermined by the recoil. In the storm of 1825, when five hundred square miles of North Holland were submerged, the masonry portion of the outer dike at the Helder gave way, while the portion built with fascines remained uninjured.

give it a very great spread or cut it up into shoals. I think it will be found necessary to cover this bank with a revetement of rubble or *fascinage*.

I have already spoken of the beton blocks at Port Saïd as having a volume of thirteen cubic yards. This is not large for outside works. I observed none smaller, in actual course of deposit, at Leghorn, Genoa, and Marseilles; while at Civita Vecchia I found the convicts rolling over the fore slope of the island mole natural stones of twenty-eight cubic yards each. At Cette artificial blocks of fifty-two cubic yards (stones of this magnitude being deemed necessary to resist the waves) have been successfully tumbled into the sea. Heavy seas are rare upon the Mediterranean, yet at Algiers blocks of beton, measuring forty-eight cubic yards, if not bound together, were turned over by the waves while the moles were in progress.*

Pell-mell moles, especially those built of beton blocks, sink considerably (often three feet) not only from the grinding to which I have before referred, but also from the wear due to the siphoning of water through the voids. The blocks at Port Saïd are constructed of sand dredged from the harbor, mixed with the lime of Theil in the proportion of two to one. This lime, which is employed for beton almost everywhere upon the Mediterranean, is not too "energetic," so that the blocks dry slowly and homogeneously. They require three months of exposure to the dry atmosphere of Egypt before they can be safely tumbled into the sea. At the new advance port of Amsterdam the beton blocks are composed of one measure of Portland cement, four measures of dune sand, and five measures of gravel. Next to Portland cement the lime of Theil is the most successful of European mortars, but it is not equally durable in different localities. At Marseilles it remains pretty firm in the mole after twenty years' immersion, but at Havre it has failed. The longest trial of beton formed of this lime has been thirty years, and it has been found to soften very lately. The moles at Port Saïd are exposed neither to frosts nor high tides, but, on the contrary, lie in a generally quiet sea of pretty uniform temperature, so that they will remain firm till the ex-

* Chevallier, *Cours de Travaux Maritimes*, 1866–67.

periment of the Ship Canal shall have been thoroughly tried. If success crowns the enterprise and the commerce with India and China chooses this route, of course these structures will be maintained even if material has to be sought in the uttermost parts of the earth.

The area comprised between the two moles is four hundred acres, a space which, when properly excavated, will accommodate forty ships-of-the-line swinging freely at their anchors, or four hundred first-class merchant ships moored stem and stern. This exceeds the proposed accommodation at the new port of Amsterdam by nearly eighty per cent. There is, however, no berth to be found which is wholly *land-locked*, i. e. from which the open sea is not visible: and the wave "reductive power" as given by application of Stevenson's formula,* is scarcely thirty per cent. In this respect the harbor of Port Saïd is inferior to that proposed for Amsterdam; but it must be remembered that the shore of Holland is more exposed to heavy seas than the coasts of the Levant.

The inner harbor is reached by a pass through the beach six hundred and fifty feet wide, and the basin within (*Grand Bassin du Port*), although not wholly excavated, is of ample dimensions.

The city of Port Saïd has existed only since the commencement of the canal. Its aspect is not unlike some of our war settlements on the coast of South Carolina. It does not yet renew the splendors of Tennis, of which the ruined walls and baths lie a short distance off in Lake Menzaleh.† This new city is but an encampment of industrial representatives of the principal nations of the earth, mingled with stragglers from Eastern tribes. The contrast of complexions, costumes, and manners, added to the varieties of language and religious rites, makes a first meeting with the motley crowd very impressive. Upon a more intimate acquaintance the distinctions are found, on the whole, to be superficial, external rather than intrinsic. Those who form the rank and file are mostly of the vagabond

* Edinburgh Phil. Journal, 1853.

† Tennis, or Tenys, now a deserted mass of ruins, six miles from Port Saïd, was a flourishing city in the time of Cæsar Augustus, and its traditions claimed that it sprang up upon the ruins of a city of the Pharaohs. It must not be confounded with Tanis (the Zoan of Jeremiah) which lies on the other side of the lake.

class, whose want of character renders them essentially alike and tolerably harmonious. Nor does it appear that in the organization of labor a mixture of races involves complication. Among the excavators, the Orientals, who for ages have been essentially, when not nominally, slaves to their employers, are quick to learn the advantages and appreciate the justice of the contract system introduced by the Franks, and I found them in the dry diggings of the canal, working out claims, in organized gangs, like the miners in California. The number of Orientals and Europeans in the service of the company is about equal, and amounts to about twelve thousand. Much of the skilled labor is done by Greeks, who are somewhat more intelligent, and very much more wicked than the Arabs.* On the steam dredges and their tenders, Greeks, Italians, and Maltese predominate. These will be available as sailors when the work upon the canal ceases. Dr. Clot-Bey expressed in his history a conviction that the Arab is well calculated to become a sailor; but I doubt if he can ever be quite content to sail in Christian ships. The number of those who thus far have entered the foreign mercantile service is small.

At Port Saïd, and at other important settlements along the canal, the company has built hospitals, churches, and mosques; and everywhere the evidences of a wise regard for the workman's wants appear. In the relation of master and man, I observed neither arrogance nor insubordination. The Frenchman is democratic in his feelings and kindly in his bearing, but his discipline is nevertheless rigid and impartial. The foundries and machine-shops of Port Saïd are on a great scale, so that steamers will find the means of making repairs, and able machinists, at the very threshold of the canal and the sea. The city is supplied with Nile water, brought thither in pipes from the Fresh-water Canal.

In referring to my observations on the canal proper, I shall take for my text the following table, which was furnished to me by the Company.

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* I use the word "Arab" in its ordinary loose sense for Egyptians and their African and Asiatic neighbors. Strictly speaking, the Bedouin, who never works, is the true Arab. He does a little trading at times along the canal, but never yields any of his natural rights to the *Compagnie Universelle.*

Successive Points on Canal.	Width of Bed.	Width at the Water-line.	Width at the Plane of the Desert.	Total Height of the Banks above Water-line (Cavalier included).	Remarks.
Nautical Miles.	Feet.	Feet.	Feet.	Feet.	
0 to 0.43	....	....	....	....	Harbor of Port Saïd.
0.43 " 0.48	180.4	436.2	436.2	5.9	Depth of Canal 26.2 feet.
0.48 " 0.54	170.5	426.4	426.4	5.9	" " " "
0.54 " 0.59	150.9	406.7	406.7	5.9	" " " "
0.59 " 0.64	121.4	377 2	377.2	5.9	" " " "
0 64 " 0.70	85.3	341.1	341.1	6.5	" " " "
0.70 " 7.56	72.1	328.0	328.0	6.5	" " " "
7.56 " 8.64	72.1	328.0	344.4	4.9	Raz El Ech.
8.64 " 9.72	72.1	328.0	328.0	9.2	Depth of Canal 26.2 feet.
9.72 " 12.42	72.1	328.0	328.0	9.8	" " " "
12.42 " 13.50	72.1	328.0	328.0	11.4	" " " "
13.50 " 14.58	72.1	328.0	328.0	13.1	" " " "
14.58 " 21.00	72.1	328.0	390.0 to 433.0	6.5 to 16.4	" " " "
21.00 " 21.27	72.1	328.0	390.0 " 442.8	6.5 " 32.8	" " " "
21.27 " 25.27	72.1	328.0	390.0 " 433.0	6.5 " 16.4	" " " "
25.27 " 25.59	72 1	328.0	387.0 " 472.0	6.5 " 32.8	" " " "
25.59 " 29.59	72.1	328.0	390.0 " 433.0	6.5 " 16.4	" " " "
29.59 " 30.13	72.1	328.0	360.8 " 393.2	6.5 " 32.8	" " " "
30.13 " 32.61	72.1	328.0	390.0 " 433.0	6.5 " 16.4	" " " "
32.61 " 32.66	72.1	328.0 to 314.8	400.0 " 360.8	6.5 " 16.4	" " " "
32.66 " 33.42	72.1	314.8 " 190.0	347.6 " 236.0	13.2 " 29.7	" " " "
33.42 " 34.12	72.1	190.2	206.6 " 321.4	6.5 " 36.0	" " " "
34.12 " 34.77	72.1	190.2	196.8 " 321.4	9.8 " 36.0	" " " "
34.77 " 35.31	72.1	190 2	196.8 " 354.2	13.1 " 26.2	" " " "
35.31 " 35.58	72.1	190.2	196.8 " 308.3	16.4 " 36.0	" " " "
35.58 " 36.61	72.1	190.2	216.4 " 305.0	16.4 " 32.8	" " " "
36.61 " 38.07	72.1	190.2	305.0 " 370.6	29.5 " 68.9	" " " "
38.07 " 38.88	72.1	190.2	370.6 " 462.4	55.7 " 108.2	Barrier of El Guisr.
38.88 " 39.42	72.1	190.2	462.4 " 269.0	108.2 " 26.2	Depth of Canal 26.2 feet.
39.42 " 39.74	72.1	190.2	269.0 " 321.4	32.8 " 45.9	" " " "
39.74 " 39.90	72.1	190.2	321.4 " 242.7	39.6 " 22.9	" " " "
39.90 " 40.28	72.1	190.2	242.7 " 429.6	22.9 " 49.2	" " " "
40.28 " 40.71	72.1	194.3	367.3 " 308.3	59.0 " 16.4	" " " "
40.71 " 42.22	72.1	Width of Lake Timsah.	....	No Banks.	" " " "
42.22 " 42.44	72.1	328.0	413.2	22.9	" " " "
42.44 " 42.66	72.1	Width of Lake Timsah.	....	No Banks.	" " " "
42.66 " 43.47	72.1	328.0	400.1	13.1	" " " "
43 47 " 45.09	72.1	328.0	373.9	6.5	" " " "
45.09 " 45.14	72.1	328.0 to 190.2	262.4	26.2	" " " "
45.14 " 46.76	72.1	190.2	314.8	59.0	" " " "
46.76 " 50.54	72.1	190.2	295.2	62.3 to 19.6	Barrier of Serapéum.
50.54 " 50.59	72.1	190.2 to 328.0	275.0 to 393.6	32.8	Depth of Canal 26.2 feet.
50.59 " 51.46	72.1	328.0	373.9	13.1	" " " "
51.46 " 51.62	72.1	328 0 to 656.0	373.9 to 820.0	13.1 to 6.5	" " " "
51.62 " 52.00	72.1	Lacs Amers.	....	6.5 one bank on African side.	" " " "
52.00 " 66.42	72.1	do	....	No Banks.	" " " "
66.42 " 68.04	144.2	do	....	(Cavalier submerged) 6.5 feet below.	" " " "
68.04 " 69.66	72.1	328.0 to 393.6	....	No Banks.	" " " "
69.66 " 70.74	72 1	360.8 " 426.4	....	(Cavalier submerged) 3.2 feet below.	" " " "
70.74 " 71.82	72.1	410.0	492.0	13.1	Depth of Canal 32.8 feet.
71.82 " 73.44	72.1	367.3	426 4	16.4	" " " 31.7 "
73.44 " 75.06	72.1	262.4	419.8	36.0 to 49.2	Barrier of Chalouf.
75.06 " 76.14	72.1	223.0	410.0	49.2 " 36.0	Depth of Canal 31.7 feet.
76.14 " 84.24	72.1	301.7	367.3	16.4 " 19.6	" " " 29.5 "
84.24 " 85 32	72.1	308.2	308.2	....	" " " 29.5 "
85.32 " 86.40	262 4	492.0	472.3	....	" " " 29.5 "
86.40 " 87.48	311.6	Roadstead of Suez.	426.4	Mouth of Canal.	" " " 28.5 "

It must be borne in mind that the canal is without locks and gates, — indeed, without noteworthy masonry, — and that the

elements given above are those of a great trench, dug partly by floating machinery and partly by hand labor. It will be observed that it passes through three natural barriers ("*seuils*"), at El Guisr, Serapéum, and Chalouf; and that between these barriers lie two ancient sea basins known as Lake Timsah and the Lacs Amers. By reason of the great expense that attended excavations through the barriers, the surface width was reduced at these three localities, but the width of the channel bed is nowhere less than seventy-two feet. The total amount of earth excavated may be set down at one hundred and four millions of cubic yards, which, taken in connection with the table of dimensions, shows that if the track followed had been a horizontal plane, its elevation would have scarcely exceeded that of the mean level of the two seas.

In traversing the first five miles of Lake Menzaleh I could see no decided variation in the material brought up by the dredge, although we crossed Linant's site of the ancient Tanitic branch of the Nile. Below the sands I call the material Nile mud which has undergone a "sea change," and has been converted into a sort of tough blue clay, like that which we frequently find in our harbors.*

At Ras El Ech, 7.8 miles from Port Saïd, where the true site of the Tanitic branch seems to be, the material becomes mostly mud, which crumbles into dust when exposed to the sun; yet even here lumps of hard material appear, which contain vegetable fibre, blue clay, shells, and corals.

Twelve to thirteen miles from Port Saïd the Pelusic branch of the Nile is reached, and here the surface soil may be at once recognized as Nile mud. It is above the level of the sea, and yet strata of salt testify to occasional overflows of sea water. In this locality I had no opportunity of examining the material from great depths. Twenty miles from Port Saïd I found portions of the lake, which are represented upon all maps as covered with water, dry and covered with salt, as with newly fallen

* Mr. Taylor, Chief of the Bureau of the *Société des Forges et Chantiers de la Méditerranée* at Toulon, informs me that the Nile mud (which dissolves in fresh water) inclines to set in sea-water. He has experimented upon it. I have observed on the shores of Sandy Hook firm balls of clay rolling along the beach, and I am inclined to think that the clays of our shores undergo changes of consistency on reaching the sea. The blue clay of the Mississippi delta is met with at the mean level of the sea.

snow. In this neighborhood the surface material resembles the mud of our salt marshes, and seemed to stand well above the water-line. I observed, indeed, that where the dredges had broken ground the moist soil, for heights of two to four feet, stood nearly perpendicular. Here there are dunes within a short distance upon the Asiatic side, and upon these, as well as upon the lower sands, occasional shrubs of tamarisk appear.

Near Kantara, twenty-three miles from Port Saïd, the canal leaves what may be properly called Lake Menzaleh, but after crossing a short reach of sand (the caravan track from Cairo to Syria) reaches another lake, or rather depression, for it only became a lake by the occurrence of a crevasse in the banks of the canal. The bed of this lies several feet below the level of the Mediterranean. Upon this lake are found the ruins of two cities, which probably flourished during the period when the Pelusic branch supplied fresh water to these basins. In leaving Lake Menzaleh the Nile muds and clays seem to disappear, and the material becomes loose sand, difficult to manage, especially in depressed basins. At a point thirty-three miles from Port Saïd, on reaching the dune country, the canal width is reduced to the minimum.

The portion of the canal I have thus far described is in many respects the weakest, because the banks of sand and mud are here and there inclined to slip; rubble-work and rude *fascinage* have been resorted to, however, with success.

I shall now pass on to the barrier of El Guisr, where a range of dunes forms a summit level between Lake Menzaleh and Lake Timsah.

The dunes in this portion of the desert are in motion, but this motion is somewhat superficial. In cutting through them, some horizontal strata of gypsum appear. I observed that one of these lay about three feet above the surface level of the Mediterranean, and was six inches in thickness. Except for these strata, the material would be of the worst description for banks. As it is, a rubble facing has been placed upon the slope at the water-line. As we have here a width at the canal surface of 190 feet, and a width at the bed of 72, with a depth of 26, we may consider the talus slope as 1 : 2.25 nearly, — a very steep slope to be maintained in sand washed by steamers' waves. In this section it is estimated that the winds drive into

the canal 130,000 cubic yards per annum, i. e. a heavy month's uninterrupted work for a first-class dredge.*

In the neighborhood of this barrier are found traces of an ancient canal, called the canal of Necos — I do not know upon what authority. It appears to approach Lake Timsah from the northwest. Necos is credited by Herodotus with the first conception of a canal from the Nile to the Red Sea; but it is very well ascertained that this was an error and that such a canal had existed many hundred years before. The grand achievement of Necos was the sending of an expedition from the Mediterranean to the Red Sea by way of the Cape of Good Hope, twenty-one centuries before Bartolomeo Diaz and Vasco de Gama.†

With a slightly increased section, the canal approaches and finally enters Lake Timsah abruptly at a distance of forty-one miles from Port Saïd. This lake, the name of which signifies *crocodile*, has been at some former period a fresh-water basin fed by the Nile. Vast deposits of river mud were found upon its dry bed when the engineers of the canal first traversed it. It was no doubt a reservoir for the ancient canal of the Pharaohs, which is still traceable. This canal, leaving the Pelusic branch of the Nile at the ancient Bubastis, near the modern Zag-a-zig, ran nearly due east through the land of Goshen into Lake Timsah, and thence to the Red Sea. Although it was reopened and renewed by subsequent rulers, — the Persians, the Ptolemies, the Romans, and even the first Caliphs,—there seems to be little doubt that this avenue of communication between the two seas existed in the time of Rameses II., when the children of Israel were preparing to leave the land of Goshen, where they had lived four hundred years.‡ The probability is that Lake Timsah had been the reservoir of irrigation for the land of Goshen a long time before even the Rameses; because it is unreasonable to suppose that the engineers who conceived the splendid works of Lake Mœris and the Berket-el-Keroon, seven centuries before the Rameses, could have failed to recognize in the basin

* Lecture of M. Lavalley before the Society of Civil Engineers at Paris, November 27, 1868.

† Rawlinson's Herodotus, App. Book II.

‡ Sir Gardner Wilkinson and Baron Bunsen agree in tracing the canal back to this Rameses. Lepsius regards this king and his immediate successor as the Pharaohs of Exodus.

of Lake Timsah an admirable site for similar operations. The "pasture land" of Goshen, once the "best" of the land of Egypt, is now but a desert, nor can it be restored without again constructing a receiving-reservoir.* It is too far from the main stream and too far in the desert for any great supply of water to be maintained by a simple canal during the season when the river is low. In the project of the present Fresh-water Canal it was estimated that if all the water yielded by forty openings of the locks per day were devoted to irrigation in summer, it would answer for fifty-nine thousand acres, — a space smaller than the District of Columbia. This water, in the season when the river is low, has to be pumped up from the Nile and conveyed fifty miles before reaching the border of the land of Goshen.

The Fresh-water Canal, built by the present *Compagnie Universelle*, is essentially but a renewal of the ancient water-way of the Pharaohs, although it takes its rise farther west, in the main stem of the Nile. It communicates with Lake Timsah by locks. Along its track vegetation is rapidly reappearing, although, of course, the canal bears no great supply of sediment. But I observed, even where these fresh canal waters had become clear by filtering through the sand for a hundred feet, that their reappearance in the depressions beyond was followed by a heavy growth of rushes. The experience of those who have dug wells in the desert, from Moses down to Louis Napoleon, has been ever the same. In Arabia as in Algiers the soil demands only fresh water to clothe itself with verdure. It is difficult to conceive of natural causes which could have produced a great depression in the desert like Lake Timsah. There are at many points shallow basins which have evidently been hollowed out by the winds; but such cannot become deep, since the winds, bearing along only the fine sand, soon leave behind a sufficient quantity of flints to forbid further action.

In crossing Lake Timsah the canal has generally no banks, and yet the bed upon which the full depth is preserved is not enlarged. Vessels of great draught will find some difficulty in

* "And Pharaoh spake unto Joseph, saying, Thy father and thy brethren are come unto thee. The land of Egypt is before thee; in the best of the land make thy father and brethren to dwell; in the land of Goshen," etc. — Gen. xlvii. 5, 6. Again, in the same chapter, Joseph speaks of it as the "best of the land, the land of Rameses."

keeping in the channel during strong winds, — a difficulty which has been felt in the Caledonian Canal where it passes through the Scotch lochs. It is true that in the Caledonian Canal it is the sudden gusts from among the highlands that are troublesome when crossing the lochs, and these are not common in Egypt, where the breeze, though usually strong, is not fitful. It is the design of the Suez Canal Company to buoy and beacon the track thoroughly.

Lake Timsah is surrounded by a confused mass of dunes, which, to use the metaphor of Bremontier (applied to the Landes of France), resemble "*a sea in which the waves, in the fury of the storm, have become suddenly fixed*," — as they might appear if seen by a flash of lightning at night. Farther off, in the more central part of this land of Goshen, where there are broad plains covered with flints, solitary dunes are seen like golden islands, and these are objects of grace and beauty in every detail. On near approach to one of them the sands may be seen travelling up the long rear slope before the wind, flying in the air at the crest, and falling down the fore slope in a perpetual cascade, — everywhere in motion, but preserving always the same faultless curves. Nor do these dunes leave a grain behind them to mark their tracks. The homogeneous sands of which they are composed are as fine as those we usually see in the hour-glass, and like the latter they serve to measure the lapse of time in their steady march.* In the neighborhood of Ismaïlia repeated measurements show that the advance is 98 feet per annum, — an unusually rapid rate. Bremontier, in 1780, stated the rate of the dunes of Les Landes at 65 feet per annum.† The prevailing winds in this portion of the desert blow from due north, and are more steady than at Port Saïd or Suez. In consequence of this the course of the dunes is so nearly parallel to that of the canal that their slow approach can always be prepared for. They can at any time be fixed by covering them with hedges of brushwood, but they can never be utilized like those of the Landes.

* Deluc and Cuvier declare the dune to be a *véritable chronomètre*.

† In the Landes the inclination of the fore slope was found to be 50° to 60°, while that of the rear slope varied from 10° to 25°. See *Annales des Ponts et Chaussées* for 1833. The finest American dune that I have seen is at Cape Henlopen, which, although far inferior to those of Egypt, is really more perfect than any one I could trace in the now forest-clad Landes of France.

Lake Timsah is now a broad expanse of water covering nearly five thousand acres. The volume necessary to fill it was ninety-four million cubic yards, and this was led in from the Mediterranean through the canal, which at that time was but a ditch. The period required was five months, because it was found necessary to keep the velocity from rising above 0.59 mile per hour through the barrier of El Guisr, to prevent injury to the banks. Dubuat, from direct experiments in 1816, furnished a table of effective velocities of running water, in which he placed the rate which would move fine sand at 0.31 mile, and gravel the size of little peas at 0.34; he observed that a velocity of 0.60 caused grains of sand to move 6,560 feet in a year. Thomas Stevenson, in his work on harbors, gives a table compiled from different authors, in which 0.30 is given for lifting fine sand, and 0.39 for gravel as coarse as lint-seed; while to "sweep along fine gravel requires 0.59 mile per hour." T. Logan, in the proceedings of the Royal Society of Edinburgh, gives the details of recent experiments made by himself, in which he places the velocity required to move fresh-water sand at 0.41, sea sand 0.65, round gravel the size of peas 1.18 mile per hour. In calculating the resultant or scouring forces of tidal currents in our harbors, the Coast Survey has regarded all velocities below 0.33 mile per hour as ineffective, and has considered this velocity as just equal to the starting of grains of quartz sand. I see no reason yet to change these figures. Between the velocity necessary to *start* fine sand and that adequate to tumble down the banks of a canal in a serious or sensible manner, there must be considerable difference, — quite as much, perhaps, as the difference between 0.33 and 0.59; but Logan's result, 0.65 for sea sand, is certainly too large.

Leaving Lake Timsah, the canal traverses a series of little lagoons for about two miles with the full width of 328 feet, to the barrier of Serapéum, forty-seven miles from Port Saïd, and forty miles from the roadstead of Suez. In this locality are found the traces of ancient canals and the ruins of ancient settlements, indicating that here were once depots of commerce.

The barrier of Serapéum is far less formidable than that of El Guisr, but the width of the pass is here reduced again to 191 feet. The canal was dug dry to a certain extent, and then

deepened by dredges, floated by water let in from the Fresh-water Canal. The engineers informed me that it would have probably cost less to dig it altogether dry, as at Chalouf, of which I shall speak hereafter. In this section there are extensive depressions below the level of the Fresh-water Canal, so that it was found convenient to flood these, and then deposit in them the material brought by scows from more elevated portions of the cut. The greatest elevation of the banks is about 62 feet. This is a dune section, yet the distinct traces of the ancient canal of the Pharaohs is found taking a course nearly parallel to the present maritime canal, and apparently passing with it into the Lacs Amers. But I am satisfied that the canal of the Pharaohs did not discharge into this ancient sea basin, since there are no traces of Nile mud and there is no evidence in history of its having made its terminus here. Probably it passed along the conveniently level border of this depression.

The Maritime Canal takes again its full width of 328 feet about a mile and a quarter before reaching the Lacs Amers, and enlarges gradually as it approaches the shore of the latter. I have already spoken of the tidal traces in the Lacs Amers, and of the shells strewn along their shores; I have now to call attention to the great area of the lakes, which is likely to prove an inconvenience. The depression consists of two unequal basins, the more northern having a length (northwest to southeast) of $13\frac{1}{2}$ miles, and a maximum width of 6 miles; while the smaller basin, lying further south, has a length of about $6\frac{1}{2}$ miles, and a width of less than 2 miles. The total area may be estimated at 100,000 acres.

In both of these basins great deposits of salt are found. The layer covering the bottom of the greater basin, which is upon the average from eight to ten feet thick, is estimated at sixty-eight millions of cubic yards, — a quantity equal to two thirds of the volume of earth excavated from the canal for the entire distance from the Mediterranean to the Red Sea. "As you descend into this basin you come first upon gypsum and other salts of lime, which, being less soluble, have been first precipitated, before the water shrank to the maximum saturation for the other salts." * It is probable that no portion of this deposit

* V. Cadiat, *De la Situation des Travaux du Canal.* 1868.

was made during the period when this basin was visited daily by the tides of the Red Sea, since we know of no instance where tidal lagoons, however cut off from fresh-water feeders, precipitate salts, or even increase greatly in density. After the barrier (Chalouf) between this basin and the Red Sea had sufficiently formed to obstruct the tides, it is probable that at rare intervals it was broken or overflowed by the waters heaped up in the roadstead of Suez during southerly gales, so that the lake alternately dried up and partially refilled. In Lake Timsah, where at the time of my visit there was no tide, and where the single communication with the Mediterranean had been for the greater part of the year very contracted and much obstructed, the density of the water had advanced only from 1.026 to 1.043. With free communication between the two seas, not only will no more salt be deposited, but that which lies upon the bed of the Lacs Amers must be dissolved, because there will always be a movement through the canal. The mean levels of the two seas nearly correspond; but their temporary variations must be dissimilar. Winds which depress the sea at one extremity of the canal elevate it at the other, and the changes dependent upon the declinations of the sun and moon, as well as those dependent upon atmospheric pressures (barometric), cannot be equal or even coincident in the two seas.*

Over a large part of the great basin of the Lacs Amers the depth exceeds four fathoms, and the water volume of both basins combined is estimated at two thousand four hundred and eighty millions of cubic yards, without counting salts displaced by absorption. The major axis of the great basin lies about in the direction of the prevailing wind, so that it must be frequently subject to agitation. Indeed, by Stevenson's formula there should be at times waves five feet and a half in height. The canal entrance at the north end of the lake is usually under the lee, but in the spring it is not unlikely that it will sometimes be attacked by a sea capable of doing much mischief, not only by disturbing the banks of the canal itself, but also by rendering the ingress and egress of shipping unsafe. The little lake

* I could obtain no positive information touching these changes in the two seas. The tidal observations had not been worked up for the purpose.

from which the canal passes on towards Suez is pretty well protected naturally. If vessels have occasion to come to anchor in the Great Basin, they must be provided with good ground tackle, for from the centre of it the land that offers them protection is seen but as a broken chain along the horizon, and the desert winds are strong. In the Little Basin of the Lacs Amers the canal has at some points submerged banks, which will be a source of trouble even if well marked, because to follow buoys and even dolphins through a channel only from 70 to 130 feet wide is a very perplexing task in windy and thick weather. The fogs were very dense in the morning during my stay in the desert, and this too while the Lacs Amers were still dry. In the sunlight the colors of the water will betray the position of the channel very exactly; and it is the intention of the company to build beacons every three hundred and thirty feet.*

The canal makes a curve a little northward of the middle of the Little Basin, and here the company has very wisely given to the rocky bed an increased width of 144 feet, with banks of three to one up to the natural bed, which is here fourteen feet below the mean level of the sea. The work has of course been executed dry in this section, and beyond through the barrier of Chalouf.

Emerging from the Lacs Amers at a point seventy-one miles from Port Saïd (seventeen miles from the Red Sea), the canal still continues along a rather low portion of the desert for about two miles, in which space the profile of the section is peculiar. The upper slope is five to one, which may be set down as the slope of repose for dry sand everywhere in the desert where rains are inconsiderable. In this profile the slope of five to one continues to a point a little below the lowest tides of the Red Sea, then becomes horizontal, forming a berme about thirty-eight feet wide, beyond which the slope is increased to two to one and descends to the bed, which is over five fathoms below the mean level of the sea. The gradual slope for the perimeter of the tidal prism and the broad berme below are designed to anticipate the effect of a dissolution of some strata of salt which are exposed in the cut. One of these strata, about a foot thick, is seen like a layer of pure snow.

* The training-wall of the Clyde is submerged at very high water, and is marked by beacons in this way.

At the barrier of Chalouf, seventy-four miles from Port Saïd (thirteen miles from the Suez roadstead), the banks rise fifty feet above the water level with a dry slope of 45°, at the foot of which a level terrace for a tow-path is constructed, about sixty feet wide, on either side. This terrace lies above the level of the highest tide of the Red Sea. The slope for the tidal prism is five to one, and below this there are two slopes of equal length, respectively three to one and two to one, stretching down to the bed, which lies over five fathoms below the mean level of the sea. The material met with in this barrier is principally clay and solid gypsum. Under the gypsum, at the depth of twenty feet below the sea-level, is a bed of freestone or grit, in which are found remains of marine animals, some of them extinct species. One of the laborers gave me a megalodon from this stratum. The excavation has been made by hand and the material carried up inclined planes by steam-power and deposited in cavaliers stretching back from the canal into the desert.

Leaving the barrier of Chalouf, the canal runs through a plain five feet above the mean level of the sea. For twelve feet above the bed of the canal the bottom is of hard shell rock with light coral intermixed, which at some points required blasting; above this is red shingle and the top sand; which sand, here as elsewhere, takes a slope of repose, five to one. The form of section referred to above for the Chalouf barrier is maintained. The height of the banks in the plain of Suez nowhere exceeds twenty feet. Through this plain and parallel to the line of the present Ship Canal ran the ancient canal of the Pharaohs. This canal was cleaned out for the last time by Amrou, who named it after his master, "Canal of the Commander of the Faithful." "It remained in this state one hundred and fifty years, until the reign of the Abbasside Caliph Abou-Jafar-el-Manzor, who in the year 159 of the Hegira (A. D. 781) ordered it to be closed at its outlet in the Sea of Kolsom" (Red Sea).* This canal, which has been dry eleven centuries, is still at several points in a remarkable state of preservation. As I rode along its bed and climbed its banks, I could scarcely

* From Schems-Eddin, cited by Linant and Mongel in their report upon the original project of the present Ship Canal, 1855. Amrou actually proposed a direct canal from sea to sea.

believe that a single generation had passed since it was a pathway of commerce. In this portion of the desert, which is not traversed by dunes and is rarely washed by rains, all is changeless; your footprints remain in the soil till other footsteps obliterate them. One of my engineering friends picked up from the ground some pieces of silver and copper money which had not been current among men for fifteen centuries.

After traversing the shallow lagoons for a distance of some six miles, the Maritime Canal enters the magnificent roadstead of Suez under the shelter of a handsomely paved rip-rap jetty. In approaching the sea, the section of the water-way enlarges, so that at its opening upon the roadstead the width at bed is 311 and the depth 28½ feet.

The Suez roadstead furnishes some land-locked anchorage berths, although the shelter to the southeast is distant and low. The holding-ground is perfect, — a light-brown clay. The Egyptian government has constructed dry-docks at the head of the roads after the most approved plans, and every facility for repairing and refitting ships will be found there and in the neighborhood. In spite of the absence of vegetation the scenery about the roadstead of Suez is very beautiful and grand. The sea has the rich blue of the bay of Naples, and the purple crags of Ghebel Attaka rise nearly three thousand feet upon the African shore.

Our information relative to the Red Sea generally is exceedingly meagre. The chart in use is from the survey of the East India Company, and is pretty good. From the reports of shipmasters, it would appear that northerly winds prevail to such an extent that sailing-vessels would find it difficult to work their way up to Suez. And yet we know that, previous to the discovery of the Cape of Good Hope in 1497, the Venetians and Turks had a considerable fleet of trading-vessels in this sea, and that the Portuguese sent a fleet in 1538 to destroy these vessels. I have no doubt that when the shores of this sea shall be properly lighted, its dangers marked by buoys and light-ships, and a better chart published, sailing-vessels will find their way up by taking advantage of occasional slants of wind, and of the current which, upon the lull of the north wind, sets up steadily, although feebly.

The channel is nearly everywhere over fifty miles wide, so that there is ample room for beating. The tidal currents do not seem to be either steady or strong, although there is a rise and fall of seven feet at Bab-el-Mandeb, and of five feet at Suez. In the central portion of this sea there appears to be as little tide as in the Mediterranean. The sky is clear nearly all the time, so that the latitude can be determined perhaps every day. The saving in distance between our ports and the East Indies by this new route is 3,200 miles *at least*, and over 4,000 miles upon the usual sailing-courses. The saving in time for outward-bound vessels will be in the same proportion; but for homeward-bound sailing-ships the route through the Suez Canal will consume more time than that round the Cape.

The Suez Ship Canal is the only one yet constructed without locks or gates, and it is the largest and deepest artificial waterway of any considerable extent that has ever been made. There are only three other long canals that claim to float first-class ships, viz., the Caledonian, the Great North Holland, and the new Amsterdam Canal.* The first of these is $52\frac{1}{2}$ miles in length, with a bed 50 feet wide at the depth of 20 feet (maximum). The second is 42 miles in length, with a bed 31 feet wide at the depth of $20\frac{1}{2}$ feet (maximum); and the third is $13\frac{1}{2}$ miles long, with a bed $88\frac{1}{2}$ feet wide at the depth of 23 feet. The surface width of the Amsterdam Canal is only 197 feet, so that its sectional area falls below that of the Suez Channel.

I have looked in vain through the entire history of this French enterprise in Egypt, to discover the least trace of earnest effort or sincere co-operation on the part of the Egyptian or Turkish government. I believe that the Viceroys of Egypt, from Mahomet Ali down to the present weak prince, have been coaxed into acquiescence by the master minds that conceived and executed this brilliant work, and I am convinced that this costly avenue, and the commerce employing it, will never be secure from interruption till the territory is neutralized or otherwise wrested from Mohammedan misrule.

HENRY MITCHELL.

* The Vorn Canal in South Holland is but six miles in length, and the Saint Louis Canal, in the south of France, only *three*. Both of these are ship canals.

ART. VI.—1. *A Tale of Paraguay.* By ROBERT SOUTHEY, LL. D.

2. *The Reign of Dr. Joseph Gaspard Roderick de Francia in Paraguay.* By MESSRS. RENGGER and LONGCHAMPS. London. 1827. 8vo. pp. 208.

3. *Paraguay, and the Alliance against the Tyrant Francisco Solano Lopez.* Pamphlet. 12mo. pp. 40. New York. 1869.

4. *Correspondencia Diplomatica entre el Gobierno del Paraguay y la Legacion de los Estados Unidos de America, etc., etc.* Pamphlet. 4to. pp. 17. Buenos Ayres.

5. *Executive Documents, United States Senate. Doc. No.* 5, *Parts* 1, 2, 3. *Message of the President, communicating Information in Relation to Recent Transactions in the Region of the La Plata.* pp. 118, 150, and 38.

Executive Documents, United States House of Representatives, No. 79. *Letter from the Secretary of the Navy, in Answer to a Resolution of the House, transmitting Correspondence relative to the Paraguay Difficulties.* pp. 95.

Miscellaneous Documents, United States House of Representatives, No. 8, *Pt.* 2. *Memorial of Porter C. Bliss and George F. Masterman.* pp. 13.

6. *Revue des deux Mondes;* 1865, 1866, 1867.

7. *Papeles del Tirano del Paraguay, tomados por los Aliados en el Asalto de* 27 *de Diciembre de* 1868. Buenos Ayres. 1869. Pamphlet. 8vo. pp. 140.

WE are told that in the reign of Augustus the temple of Janus was shut, for the whole world was at peace. That universal harmony has not been of frequent recurrence. Even when the earth in general is free from strife, there seldom fails to be some section of it which is still "the seat of war."

Such, at the present time, is the so-called Republic of Paraguay. Its ruler, the third in a strange succession of despots, charged with many grievous crimes, but sustained by the simple and brave people whom he governs, has defied for years the power of three nations, two of them occupying territories far more extensive and populous than his own. The interest

of the struggle is deepened for us by questions that have arisen, affecting the character and conduct of some of our diplomatic and naval officers, and our national rights and honor. Still, the scene of strife is so distant, and the information possessed with regard to it so imperfect, that few probably have any definite conception of the nature of the quarrel, or of the manner in which our country or its representatives became connected with it.

When, in 1527, Sebastian Cabot, then in the service of Spain, sailed up the Parana and the Paraguay, he found the Indians on their banks decorated with ornaments of silver; and, ignorant that the metal had been brought across the continent from Upper Peru, he gave to the mighty stream, of which these were branches, the name of River of Silver (Rio de la Plata). Interested in his accounts, the Spaniards undertook another expedition. Two thousand in number, we are told, they landed where the city of Buenos Ayres now stands; thence ascending the Parana, they repeated constantly to the Indians, Plata, Plata! and, by the more intelligible language of signs, showed of what deity they sought the shrine. That shrine they did not find; but they established on the banks of the Paraguay a fort, which became the beginning of the city of Assumption, — the day on which the fort was begun being the 15th of August, the festival of the Assumption of the Virgin Mary.

Years passed; wars took place between the settlers and the natives, in which the strength of the Indian tribes was completely broken, and a part of them reduced to slavery. Then, among conquerors and destroyers, appeared men whose mission was to save. The Jesuits, that marvellous organization, powerful alike for evil and for good, built for themselves in the wilds of Paraguay a monument of self-sacrificing usefulness, of humble and persevering labor. Combining the zeal of the devotee with the discipline of the soldier, the culture of the scholar with the varied resources of the man of the world, they found in the forests of Central South America a field of noble exertion, and of pure and splendid triumphs. The Indians of both continents have ever been more readily impressed by the ritual of the Roman Catholic Church than by the simple ser-

vices of Protestantism; but nowhere among them have missionary efforts been so successful as in Paraguay. Here the good Jesuit fathers, secured by royal edicts from all interference on the part of other authorities, whether secular or religious, came among the Indians as protectors. In the settlements which the Spaniards had already made, they denounced the oppression to which the natives were subjected, and protested against that iniquitous slave-trade which was carried on by parties from the frontiers of Brazil, who captured the defenceless Indians in order to sell them to the Portuguese. They obtained at length a concession of the region between the Spanish settlements and Brazil, that they might found in it missions for the reduction of the Indians to civilization.

To carry out this purpose, they built, in each instance, a church, and grouped around it the dwellings of their converts. Among these they established a routine of duties, monastic in its regularity. "All the Missions," says one of our authorities, "presented a uniform aspect. In the centre of the square rose, supported by three roofs, the dome of the church; to the right was the college, the dwelling of the fathers, and general storehouse of the community, with its cloisters, its courts, its gardens, its blooming orchards; to the left the cemetery, whose crosses were hidden under orange-thickets. The village formed a rectangle, the streets of which crossed each other from north to south and from east to west; while around extended the grounds set apart to each family, the pastures, and the large farms of the community." The arrangements of the day were guided by the church bell. At dawn it called the whole population to hear mass; that duty done, they went to their several labors; each followed the occupation he had chosen, but none was idle, and all alike partook the fruits of the common industry. At noon the bell called them to a two hours' rest, and in the evening again to their devotions.

> "In grateful adoration then they raise
> The evening hymn. How solemn in the wild
> That sweet accordant strain wherewith they praise
> The Queen of Angels, merciful and mild:
> Hail, holiest Mary! Maid, and Mother undefiled."

Such are the words of Southey in his "Tale of Paraguay." This tale is one of the simplest of Southey's poems, and its pretty little story, scarcely altered at all from the narrative of the Jesuit Dobrizhoffer, illustrates the gentle, obedient, believing spirit of the Paraguayan Indians, — far different from that of their stern, obtuse, irreclaimable brethren of the northern continent. Among such a people the labors of the missionaries found a rich reward. The desert bloomed around them; and its simple children, if the civilization to which they attained was not of the highest type, were yet orderly, industrious, and happy in this world, and possessed of an undoubting faith in what had been taught them of the world to come.

The settlements were not without enemies. The slave-hunters from Brazil, "border ruffians," not Portuguese alone, but the offscouring of every Christian land, broke up by force the missions nearest them. "The Jesuits of La Guayra fled with their flocks; they descended the Parana on a flotilla of seven hundred *balsas*, — rafts supported on two canoes fastened together. Having arrived at the falls, where the river for twenty-five leagues plunges from one abyss to another, they lost three hundred balsas, and were compelled to open a passage through the virgin forests, through networks of tangled vines, among rocks and precipices, where beds of fern concealed unfathomable fissures into which entire families fell and were seen no more. . . . . They labored through the day, singing hymns as they went; and at night, having prepared their shelter on the back of the river, they intoned together the psalm of exile, mingling with the roll of the cataracts and the roar of the tempest in the forest the sacred notes, *Super flumina Babylonis*."*

This was in the earlier period of the enterprise. Later, the fathers taught their converts to use the arms of civilized warfare; and on Sunday, according to Spanish custom, when the pomp of worship had given place to festivity, dances, bull-fights, and games of strength or skill, the soldiers were reviewed by the Jesuit fathers, some of whom probably, like the founder of their order, had been warriors of this world before

* *Revue des deux Mondes*, 1865.

they became champions of the cross. Such was the control in which they held their subjects, that, we are told, a colonel, returning at the head of his regiment from a gallant and difficult achievement, bent himself, at a sign from the priest, to receive the chastisement of blows for some offence, and said, kissing the hand which had struck him, "God bless you, my father, for you have made me perceive my fault!"

Thus, for a century and a half, did the Jesuits govern these grown-up children, making them happy in their childishness, but keeping them children still. Strange, that the downfall of the order should take its origin from the scene of its highest and most honorable success! In 1750, in a new arrangement of boundaries, Spain surrendered seven of the Missions to Portugal; and the fathers and their flocks were most unjustly ordered to abandon their homes. The Indians resisted, and the fathers, rightly or wrongly, were thought to have encouraged them in insubordination. Other changes followed, connected with the political intrigues of Europe. The Jesuits were expelled from Portugal and France; and, in 1766, Charles III. of Spain decreed their expulsion from his dominions. In Paraguay the decree excited amazement and rage among the Indians, and only the noble conduct of the fathers, who exerted all their influence to pacify those loving subjects from whom they were compelled to part, prevented a civil war. It is a proof of the purity of their administration, that not more than nine thousand dollars were found in their coffers. The state of these once flourishing Missions a few years since is thus sadly described by M. Page in the article from which we have already quoted: —

"Now, in place of those well-cultivated fields, of those millions of cattle, of those villages grouped around the temples whose cupolas and colonnades glittered with gold, is to be seen only a desert covered with briers, wild animals, and scattered ruins: man has fled."

The Missions of the Jesuits, it will be understood from the above statement, were far from comprising the whole population of Paraguay. A portion of them indeed were situated without the present limits of that country, in Corrientes, now one of the states of the Argentine Republic. On the other

hand, the Commanderies of Paraguay — portions of territory distributed to European settlers with control over the Indian inhabitants — had been assigned before the Jesuit plan of instruction and government was adopted. That plan found its place in the eastern portion of the country, bordering on the Parana, while the secular settlements were on the western, around Assumption on the Paraguay. In these settlements the Indians formed the mass of the population, though less completely than in those of the Jesuits; the Spaniards became blended with them, and thus arose a Creole element, destined eventually to possess controlling power. At the present day the population is principally Indian; the Guarani language, described as sweet and sonorous, is far more used than the Spanish; and with most of the men the only garment is the *poncho*, — simply a large cloth, with a hole in the middle to admit the head.

The situation of the country may be compared to that of the region which forms our States of Ohio, Indiana, and Illinois; the main branch of the Parana being represented by the Ohio River, and the Paraguay by the Mississippi above the junction. The territory in extent is about equal to Ohio and Indiana; somewhat larger than the whole of New England, and nearly twice as large as the kingdom of Portugal. Its population has been extravagantly estimated at a million and a half. More probable statements represent it as amounting, before the present war, to about six hundred thousand.

In Paraguay, as in Buenos Ayres, the first steps towards independence were taken in the cause of loyalty. When, in 1808, Charles IV. had abdicated the throne of Spain, and Napoleon attempted to seize it, the messenger sent by the latter with despatches to the Viceroy of the Provinces of La Plata was obliged instantly to re-embark, and rulers and people took the oath of allegiance to Ferdinand VII. Next came the displacement of the Viceroy Liniers by the Junta of Seville, and that of his successor Cisneros by the people of Buenos Ayres. The royal authority, thus set aside in fact, was not long retained in name; and under the guidance of a Junta, consisting entirely of Creoles, the country entered on the stormy career of an immature republic.

Meantime a royal governor, Don Bernardo de Velasco, still ruled in Paraguay; and, with a little more firmness, he might have continued to rule. The Junta of Buenos Ayres sent troops against him, but the people whom he governed obeyed his orders, and marched to meet the invaders. Not, it is said, from want of courage, but from deference to treacherous advisers, Velasco withdrew in secret from the field; but the Paraguayans, though at first thrown into confusion by the defection of their leader, afterwards rallied, and won a battle without him. In revolutionary times, men who commit such errors do not long keep their places. Velasco was soon deposed, and a Junta organized, with three ordinary men as president and assessors, and a great man — Don José Gaspar Rodriguez de Francia, Doctor of Laws — as secretary.

This able man was restrained by few scruples and found few difficulties in gratifying his ambition. The Paraguayans were mostly as ignorant as children of the meaning of the words "liberty" and "republic"; but one of their officers explained to them that liberty meant faith, hope, and charity; and Francia had, among his few books, Rollin's History of Rome, from which his countrymen were informed that the great republic which had conquered the world was ruled by consuls. Consuls therefore were chosen, — Don Fulgencio Yegros and Francia; but the latter soon discovered in his Roman History a title which pleased him better. It did not need any refined intriguing, to deal with the simple Guarani drovers who formed the Congress of Paraguay, and it was quickly determined that there should be a dictator. Yegros would have been elected, but Francia wearied the voters into compliance with his wishes, by postponing the election from day to day, and at length surrounding their place of meeting with a respectful but formidable guard of honor. So the Consul Yegros was "relieved," as we courteously say in the case of a military commander; and Doctor Francia was chosen Dictator for three years.

He took that office in 1814, and he held it for more than a quarter of a century. Old age did not relax his vigorous grasp: he died in 1840, at eighty-five, still holding the reins of power. He was a stern man, — a ruler of the old school, who knew nothing of governing by love, or of preparing the people

for freedom by giving them a share in their own government. Unyielding alike in his justice and his vindictiveness, he had been known to come forward to defend his personal enemy against oppression, and yet, when the cause was gained, refuse to be reconciled with the man he had served. He had equally refused a reconciliation with his own father, when the old man prayed for it on his dying bed. The only weaknesses that he seemed to have were those of vicious indulgence; but these he had suppressed with iron firmness when the possession of power opened to him a higher career. A just judge where his own authority was not questioned, he was harsh, even to cruelty, against any who resisted his will; and the soldiers, by whose aid he lorded it over the people, were permitted by him to lord it in their turn. Educated originally for the priesthood, he took no pains to conceal his contempt for superstition, if not for religion itself. He cut off Paraguay from intercourse with other countries, with a jealousy equal to that of the Chinese in former days. Thus those branches of industry that are connected with foreign traffic languished under his government; and even agriculture, with the raising of cattle, and the gathering of *maté*, or Paraguay tea, though encouraged at first, received a check at length, as no outlet was allowed to the productions of the country. After he had passed away, the Paraguayans would cast uneasy glances around if reference was made to Francia; and, still habitually dreading to pronounce his name, would designate him as *el defunto*, "the dead," instead of *el supremo*, as they had been used to style him.

It is not difficult to perceive Francia's political errors, and the despotism of his government awakens just indignation; and yet when we look at his country as presenting for so long a period a solitary exception to the scenes of violence which were witnessed among the South American republics, we are compelled to own the intellectual greatness, and even, to some extent, the usefulness of this singular man.

Among the books before us, the narrative of Dr. Rengger gives the most distinct information respecting the character of the first Dictator and his government. In the year 1819, this gentleman, with his companion, M. Longchamps, arrived in Paraguay, for purposes of scientific research. They were well

received by the Dictator, and appear to have suffered no other injury from him, during their six years' residence in his dominions, than that of not being permitted to leave them. Francia would probably have used with regard to them the excuse which he made in another similar case, that the persons detained had only shared the fate of all the inhabitants of Paraguay. Whether the complete isolation to which he condemned his country was necessary for its good may indeed be questioned, but there is no doubt that it was necessary for such a government as he had established. If he had allowed his tractable subjects to have free intercourse with the restless spirits with whom the other countries of South America were swarming, there would have been a speedy end to his despotism. In 1825, however, he received information of the recognition of the South American states by England, and at the same time was requested to permit the departure of certain English merchants. Gratified by the recognition, he acceded to the request; and gave similar permission to Messrs. Rengger and Longchamps.

Whether the rule of the Dictator became more wise and gentle in his old age, or whether the hope that his sway would soon end by the course of nature prevented violent efforts for its termination, it was only at his death, in 1840, that a change in the government took place. After the short dictatorship of Vibal, Carlos Antonio Lopez and Mariano Roque Alonzo were proclaimed consuls in 1841, and in 1844 Lopez was chosen President for ten years. He was re-elected for three, and afterwards for seven years; but before the expiration of the last of these terms, the President died, and was succeeded by his eldest son, Don Francisco Solano Lopez, already in command of the army of the so-called republic.

Don Carlos Lopez relaxed in some degree the restrictions which Francia had established upon intercourse with other nations. The government, however, monopolized the foreign commerce, — its agents purchasing from the people their cattle, tobacco, and *maté*, or Paraguay tea. In Paraguay there still remains much of the spirit of the old Jesuit times. There is the same unhesitating obedience to superiors, and something of the same community of goods. The services and the prop-

erty of the citizen are taken without hesitation and without compensation when needed for the use of the state. Thus Francia, when he determined, with very questionable judgment, to straighten the streets of Assumption, ordered whom he pleased to demolish their houses, and none dared to disobey, or to claim damages for the loss. In the present war, the army of Francisco Lopez, which includes all the males above childhood, receives no pay. Two thirds of the land, we are told, belong directly to the state. The President, by the seventh article of the Constitution, exercises unlimited authority, not only in case of war, but whenever he shall deem it necessary for the maintenance of peace and public order. He has also, since 1856, the power of appointing by secret will his successor. The Congress meets once in five years, its session lasting not more than five days. The government sends to the constituencies the names of the persons whom they are to choose, and its orders are implicitly obeyed. The degree of freedom in discussion which is enjoyed may be estimated from the following statement concerning the change which gave the President power to appoint his successor: "A candid member, who had played a part in this farce, turned to one of his colleagues and remarked that he did not think it was worth while to come from so far on account of such a trifle as the reform of the Constitution. The Dictator, who was at the time presiding over the session, heard the remark, and, rising from his seat, addressed the imprudent legislator in the following terms: 'You are an insolent man and a beast; leave the room at once.' It is needless to say that the offender availed himself of the advice, and hurried away, terribly frightened." *

Such, according to authority which, though hostile, we can hardly question, is the "Republic" of Paraguay. But it is the right of an independent nation to choose and to keep the form of government it prefers, even though it be a despotism; and there is a stage of national development, such as that of Russia in the time of Peter the Great, to which many still think that despotism is the form best adapted. The want of liberty in Paraguay, therefore, would not alone justify the war in which the neighboring states have combined against it. They plead

* Paraguay and the Alliance, p. 8.

far different reasons for the course they have pursued. To judge of the validity of these, we must take a view of the history of the present ruler.

Francisco Lopez was born in 1827. At the age of eighteen he was appointed General by his father. In 1852 he was sent to Europe as Minister to the courts of England, France, and Spain, but with a view also to the purchase of war materials, and still more to the completion of the young man's education as a statesman. One result of this mission appeared in the arrival in Paraguay of foreign engineers, and the erection of important works for the defence of the country. The most formidable of these was the strong fortress of Humaitá, on the Paraguay, which defended the approach to Assumption, and threatened to control the intercourse of the Argentine Republic and other nations, not only with Paraguay, but with the regions west of the river, including Bolivia and Peru. In the pamphlet to which we have referred, the elder as well as the younger Lopez is accused of ambitious designs, looking to the establishment of an empire of the La Plata.

In the same year that the younger Lopez went to Europe, the independence of Paraguay was acknowledged by Urquiza, then in power at Buenos Ayres ; and subsequently by England. Soon after occurred the first intercourse of which we are informed, between our own country and Paraguay. Lieutenant Thomas J. Page, with his vessel, the "Water Witch," was sent to the La Plata and its branches for the purpose of scientific survey. He was well received by President Lopez ; but afterwards, in 1855, during the exploration, the vessel was fired on by the fort at Itapiru, and a man killed by the shot. This led to an expedition from the United States to demand satisfaction, which was promptly rendered.

We have now to trace the circumstances which led to the present war. This arose from political complications connected with the affairs of a region not in immediate contact with the Paraguayan territory, from questions of boundary which had been long unsettled, and especially from the ambition of the new ruler of Paraguay, at that time in the flower of his age, with a full treasury and a devoted people.

Opposite the city and state of Buenos Ayres lies a country

now known as Uruguay, but often spoken of as the Banda Oriental, — Eastern Bank, — with reference to its position on the La Plata. This region, — of which the capital is Montevideo, — though settled mostly by Spaniards, is connected by a part of its population with Brazil, which bounds it on the northeast. The position of this province fitted it to be the cause and the theatre of war between the powers by which it was bounded. In 1821, Brazil took possession of it, under the plea of protecting it from the civil commotions which followed the Declaration of Independence by Buenos Ayres. This act led, in 1826, to war between the two neighboring powers, which was ended in 1828 by a treaty, dividing the country. The northern part, called the Seven Missions, was thenceforth permanently annexed to Brazil.

In the other portion revolution succeeded revolution. A disappointed aspirant for power, Oribe, called in the aid of Rosas, the despot of Buenos Ayres. Brazil, aided by French and English vessels, took the opposite side. Oribe was defeated in 1849, his protector shortly after deposed, and the harassed land at length seemed to have found peace. This proved of short duration; but we shall pass over its intervening troubles, and come to the year 1863, when General Flores left Buenos Ayres with only three companions, boldly entered the land from which he had been expelled, like Napoleon on his return from Elba, and excited his partisans to successful revolt. On the 30th of August, 1864, while the government of Uruguay was engaged in strife with this internal foe, Brazil, by its admiral, Baron Tamandaré, called it to account for various wrongs committed in the stormy period which had preceded, as well as in the war then in progress. The Uruguayans presented counter-claims, and rejected, with more spirit than prudence, the Brazilian ultimatum. Brazil proceeded to acts of war.

The President of Uruguay sought the assistance of Francisco Lopez, who had but recently succeeded to the government of Paraguay. He offered, in return, his aid in securing to Lopez possession of the island of Martin Garcia, commanding the entrance to the branches of the La Plata. The earnest desire of Lopez to obtain this island, and his subsequent course, betray his purpose of combining into one monarchy the whole

region lying between the Uruguay, the Parana, and the Paraguay. For the accomplishment of this purpose it was necessary, not only to gain possession of Uruguay, but also to rob Brazil of its province of Matto Grosso, and the Argentine Republic of Corrientes and Entre Rios. Impelled by such ambitious dreams, Francisco Lopez, departing from that wise abstinence from foreign complications which had been the policy of his predecessors, declared to the court of Rio Janeiro that he considered the entrance of the Brazilian army into Uruguay a *casus belli*, and accompanied this declaration by hostile acts. He seized the Brazilian steamer "Marquis de Olinda," imprisoned the passengers, and at first refused to the Minister of Brazil a suitable conveyance by water to his own country. Here Mr. Washburn, Minister of the United States, energetically interfered, declaring that he would close his own legation if the rights of ambassadors were thus violated; and Lopez yielded the point. He immediately invaded the Brazilian province of Matto Grosso, whose president or governor had been detained on his way to his charge, among the passengers of the captured steamer. The Brazilians complain also that the invasion of Matto Grosso was accompanied by acts of barbarity, "without any consideration of age, sex, or helplessness; entire populations being shot down like wild beasts in the rivers and forests, as they fled from the fury of the enemy." Such is the language of the pamphlet called "The Paraguayan Question." With every allowance for exaggeration, and for the acts of soldiers transcending the orders of their government, enough remains to justify serious charges against the ruler of Paraguay.

His next step, if not more criminal, was more obviously foolish. It might have seemed that one enemy such as Brazil was enough at a time; but when the Argentine government refused to allow an attack to be made on the Brazilians through its territory, Lopez turned his arms against that power, captured two Argentine steamers, invaded the Province of Corrientes and seized its capital, which bears the same name, proclaimed the annexation of the province to Paraguay, and assumed to exercise a general control over the commerce of the La Plata and its branches. This conduct united the neighbor-

ing powers against him. Flores, supported by Brazil, was now in command in Uruguay, and on May 1, 1865, a treaty was signed between these two states and the Argentine Republic, by which the three parties bound themselves to pursue the war with Paraguay till the rule of Lopez was destroyed. Neither was to make peace separately; all disclaimed the intention of increasing their own territory or interfering with the independence of Paraguay, except in securing the expulsion of her ruler; but they agreed that the Paraguayan fortress of Humaitá should be destroyed, and that all arms and munitions of war found in that country should be divided among the contracting powers.

Such is the treaty with which commenced, more than four years ago, the alliance which still continues. The burden of the war has fallen chiefly on Brazil. Uruguay, the least powerful of the allies, has been distracted by factions, in whose strife the assassination of Flores has been the most tragic incident. The Argentine Republic also, which, under its President Mitre, shared largely in the earlier operations, has had its burden of domestic dissension to bear, and has of necessity withdrawn for the most part from the prosecution of the war; though now, under the Presidency of the enlightened Sarmiento, it may be expected to assume a position of more importance than it has recently held.

Great as was the provocation offered to the allied powers, we cannot but regard the absolute pledge, mutually given, to make the downfall of Lopez an indispensable condition of peace, an error. It is not well for individuals or for nations to renounce, except for the strongest reasons, their future freedom of action. Undoubtedly, the allies thought, four years from last May, that the overthrow of Lopez would be the work of a single campaign; for the population of Paraguay was exceeded sevenfold by that of Brazil alone. But this action of the allies united the Paraguayans to defend their chief, with whose authority, in their judgment, their own national honor and independence were identified. The allies did not take into account the difficulty of transporting men, provisions, and munitions of war to a distant country, while its defenders would fight on their own soil, with every advantage of local

knowledge and of plentiful supplies. They did not foresee that at one time the cholera would prostrate nearly a third of their army; nor did they, probably, do justice to the military and civil talents which, with all his errors and crimes, the adversary they denounced has so strikingly displayed. In ignorance of the future, they deprived themselves of the possibility of an honorable accommodation with their enemy. Therefore it is that, even two years since, the number of lives sacrificed in this deplorable strife was estimated at a hundred thousand. Nor is the loss of life among their soldiers the only thing to be regretted by the allies. The long continuance of the contest, and the heroic defence of the Paraguayans, have made the world almost forget the original wrong, and look with admiration and pity on the hunted race, who stand so gallantly at bay. Bolivia and Chili have seen with uneasiness a member of the Spanish-American family of states in danger of being crushed by the descendants of the Portuguese; and were it not that the conduct of Lopez towards his prisoners, his soldiers, his people, and his own family, has aroused against him the indignation of all to whom it has become known, the struggle which at first seemed so certain to end in his speedy overthrow might have resulted in the more full establishment of his power.

In 1864 the army of Paraguay is said to have numbered from 40,000 to 42,000 men. It was rapidly augmented, the enrolment including even youths of sixteen; and Lopez commenced the war with 28,000 infantry, 16,000 cavalry, and about 3,000 artillery, with 120 pieces of cannon. The Brazilian army, in 1864, numbered but 25,000 men, and neither the Argentine Republic nor Uruguay was in a condition to add immediately to its strength. The first advantages therefore were on the side of him whose ambition had brought on the contest.

The scene of that contest may best be understood by recurring to the comparison we have already used, of the Parana and Paraguay rivers with the Ohio and the Upper Mississippi. The southwestern point of Paraguay would thus be represented by Cairo in Illinois, the country around being of the same description as Southern Illinois, low and marshy. Assumption, on

the Paraguay River, may be compared in regard to situation with Alton, the access to it being defended by the fortress of Humaitá, six leagues above the junction, commanding a bend of the river, and by that of Curupayti, somewhat nearer to the junction. Nearly opposite the southern point of Paraguay is the city of Corrientes, capital of the Argentine province of that name. The Argentine Republic, roused by the taking of this city, sent General Paunero with about 1,500 men to attempt its recovery; but they were obliged to retreat before a superior Paraguayan force. Lopez then marched across the province of Corrientes, crossed the Uruguay into Brazil, occupied San Borja, which had been deserted by its inhabitants, and possessed himself by siege of Uruguayana. He was, however, in turn compelled to retreat; his garrison in Uruguayana surrendered to the allies, commanded by the Emperor in person; and the war was soon transferred to the territory of Paraguay.

The campaign of 1865 closed, not with the approach of winter, but with that of summer; the seasons being reversed in the southern hemisphere. The allied army indeed, in December, took possession of Corrientes; but the excessive heat, and the lowness of the rivers, prevented any further advance until the month of March, 1866; and meantime the army suffered severely from its position among the marshes by which the rivers are bordered. The Paraguayan army was encamped in the neighborhood of Itapiru, a strong fortress on the Parana. After several unsuccessful attempts upon this fort, accompanied with great loss to the allies, they at length obtained possession of it. The two armies now encamped among the *esteros*, or lagoons, which abound in the southern part of Paraguay, the invaders suffering from disease much more than the natives. On the 2d of May, at noon, while the forces of Brazil and Uruguay were enjoying their *siesta*, Lopez suddenly attacked them at Estero Bellaco, and at first gained an advantage; but Flores, with great energy, succeeded in rallying his Orientals, and, with the arrival of fresh Brazilian troops, the fortune of the day was changed. A general engagement took place on the 24th of May at Tuyuti. The Paraguayan loss was the greater; but the allies were obliged to desist from the attempt to advance on Humaitá by land, and intrenched

themselves in a new position. To quote a playful line of Moore's, which becomes sober earnest in those southern latitudes,

"June had now
Set in with all its usual rigor";

and the allies, relieved by the cold weather from the unhealthiness of the climate, waited for re-enforcements from their respective states.

It was now determined to force a passage to Assumption by the Paraguay River. It was thought that Curupayti and Humaitá were the only obstacles; but the Brazilian vessels were unexpectedly attacked by a new battery at Curuzu, still lower than these. On the 2d of September this was taken, though not without heavy loss. The next object of attack was Curupayti; but in the assault on this point, September 22d, the disadvantage of an alliance appeared in divided counsels and enfeebled authority. President Mitre, the commander-in-chief, had arranged for a combined attack, — on the west by the Brazilian squadron, on the south by his own forces and those of the Brazilian Porto Alegre, and on the east by the Brazilians under Polydoro and three hundred cavalry under Flores. But Tamandaré, fearing for his vessels, kept at a respectful distance, and Polydoro contented himself with drawing up his army in order of battle. The Argentines and the Brazilians who were with them met thus the whole force of the enemy, intrenched in his strong fortress; and as they endeavored in vain to clear away the abatis of thorny trees which had been erected by the Paraguayans, they were mowed down by the cannon. Six thousand killed and wounded — more than a third of the whole force — were left on the field. Here and there the shrubs caught fire, and the Paraguayans issued from their intrenchments to save their fallen enemies from being burnt to death.

This repulse was followed by bitter recriminations among the allies; Mitre complaining of the commanders who should have supported him, while they accused him of attempting to exercise despotic authority. Brazil, however, changed her officers; Polydoro being superseded by the veteran Marquis de Caxias, and Tamandaré by the Admiral Ignazio. Mitre was recalled, with the Argentine army, by an insurrection at

home, and the supreme command of the forces that remained devolved on the Marquis de Caxias.

But now a new enemy appeared, — the cholera. The insalubrity of the country was increased by the carelessness of the troops and their utter ignorance of sanitary precautions; and the thousands of the slain, left unburied, contributed to corrupt the atmosphere. There were 7,500 sick at once in the three hospitals of the allies, and half of the number died. At length, thanks to the increasing coolness in April and May, 1867, "thanks also," it is added, "to the zeal and charity of the Capuchin fathers," they were delivered from this plague; when they found another obstacle in the rise of the rivers. For sixteen years the Parana and the Paraguay had not reached so great a height. The Brazilians encamped around Curuzu were obliged to crowd into the fort, which itself was besieged by the rising waters and exposed to a cannonade from Curupayti. Curuzu was at length abandoned with great loss; and with its abandonment ceased all communication between the camp at Tuyuti and the Paraguay River.

The Brazilian army was with difficulty recruited, principally by the enlistment of slaves. The Argentine government sent 4,000 regular soldiers, and 400 convicts from the prisons of Buenos Ayres. Caxias now attempted, and with great labor executed, a change of base, intending to attack Humaitá. By marching far into the interior, he came upon that fortress with little opposition, but not until the length of his journey had given his enemy ample time for preparation. Before anything could be effected, the arrival of President Mitre caused, according to the terms of the treaty, a change in the command. The army, mainly Brazilian, received its Argentine commander with an ill grace. Officers sent in their resignations; a land attack on Humaitá appeared impracticable; and although the new camp was better situated than that at Tuyuti, the cholera again made its appearance about the end of September.

During these events the fleet had not been idle. It succeeded in passing Curupayti, though it suffered considerable damage from the fire of the fortress; but with reduced strength it was now shut in between Curupayti and Humaitá, and apparently was not in a condition either to advance or retreat.

Meantime the United States had by its ministers offered its mediation, which was rejected. An attempt was now made in the direction of peace, and Mr. Gould, secretary of the British embassy at Buenos Ayres, visited the head-quarters of Lopez, and conveyed to him the proposals of the allies. These were highly favorable to Paraguay so far as they related to its independence, its boundaries, and the mutual restoration of prisoners; but, compelled by their treaty, the allies demanded that Lopez should, immediately on the conclusion of peace, depart for Europe. Another requirement was that of secrecy in regard to the conditions of the treaty. It would have been a noble act if the Marshal President had been willing to sacrifice his power for the good of the country; but the demand was made at a time when it seemed not justified by the state of affairs. The fleet of his enemies appeared to be entrapped between two forts, and their army separated by a wide desert from the river, on which for six hundred miles their supplies must be transported from Buenos Ayres. He rejected the proposal in a reply in which the real strength of his reasons was obscured by the vanity with which they were expressed.

An expedition against Paraguay from the north had met with no better success than the attacks on the south. A Brazilian force of about two thousand men was collected in September, 1866, at the village of Miranda in Brazil, to the north of Paraguay. Thence, in the following February, they marched, under Colonel Camisão, to enter the country between the rivers by which it was bounded. Their march was through a country deserted except by the cavalry of the enemy, who never offered regular battle, but harassed them constantly, till, worn out with fatigue, hunger, and disease, the remnant were glad to reach again their own frontier. Another force, under Señor Magalhães, retook the fortress of Corumba, which the Paraguayans had occupied since the beginning of the war; but were by the appearance of some Paraguayan steamers obliged to leave it.

In Paraguay the enthusiasm of the people grew with their dangers and their successes. Patriotic gifts poured in from every side for the supply of the army. Among other marks of public spirit, the ladies of Assumption determined to give their

jewels of gold and silver to the cause of their country, and the example was followed far and wide. Brooches and ear-rings came in, we are told, by bushels; and the patronesses of the undertaking made a public offering of this treasure. President Lopez, however, accepted only one twentieth part, to be used for a new gold coinage, to commemorate the patriotism of the ladies of Paraguay. Such is the account given in the *Revue des deux Mondes*. An eye-witness, however, who looked on the Paraguayan cause less favorably, tells us that the whole matter was ordered by the government.

But the fortune of war was now to change. On the resumption of hostilities, advantage after advantage was gained by the allies. The town of Pilar, taken by them September 20th, they were indeed compelled to abandon; but the engagements at Potrero Ovella, October 27th, and at Tayi, November 2d, opened to them the way to the land side of Humaitá. November 3d, the Paraguayans attacked the camp of Porto Alegre at Tuyuti, obtained temporary possession of it, and destroyed much of the army stores, but were driven back after a severe action, in which that Brazilian general distinguished himself by his personal bravery. With these events the campaign of 1867 closed.

That of the following year commenced with an achievement of great importance. An attack was made on the outworks of Humaitá by the land force, at the same time that the Brazilian iron-clads attempted to force a passage. The undertaking succeeded both by land and water. The vessels passed the fort beneath a storm of balls from the heaviest artillery, and Fort Establicimiento, an important outwork of Humaitá, was taken.

The next event to be noted is a political crime in the turbulent Oriental Republic. The despatch of the American Minister to Brazil, which relates it, conveys an idea of the critical condition of affairs at that period of the war: —

"A revolution has broken out in the Republic of Uruguay, and General Flores, the Dictator, who had just abdicated in order that a president might be elected by the people, was assassinated in the streets by the leaders of the Blanco party. The outrage was followed by the slaying of one hundred and

eighty of the Blancos; and thereupon order was restored in the city of Montevideo, where the Blancos are in a minority. In the country, however, they are in a large majority; and it would be idle to predict the final termination of this proceeding. The success of the allies against Lopez will go far towards restoring order in Uruguay. That success was most timely. Had it been delayed another three weeks at furthest, both Uruguay and the Argentine Republics would have withdrawn from the alliance with Brazil." (Mr. Webb to Mr. Seward, March 9, 1868, in Senate Doc. No. 5, p. 35.)

No action of great importance appears to have taken place, from the successes near Humaitá until the month of August. Then, after some engagements, seemingly unfavorable to the allies, it was discovered by them, on the 25th, that Humaitá had been evacuated, and possession was taken of it, with great rejoicing at the capitals of the allies. The taking of Humaitá was followed by other successes. Assumption at length fell into the hands of the allies. Lopez retreated to the interior of the country, where, defended by mountains and morasses, he still offers resistance.

Recently the chief management of the war has passed into new hands. The Marquis de Caxias has been succeeded by the Count d'Eu, — Gaston d'Orléans, eldest son of the Duke de Nemours, and grandson of King Louis Philippe. This prince, who is about twenty-six years of age, is the husband of the Princess Isabella of Brazil, eldest daughter of the Emperor, and heiress presumptive to the crown. The Count embarked from Rio Janeiro for the seat of war on the 30th of March of the present year. Since his arrival, the allied army has advanced up the country, cutting off the Paraguayan leader from the valley of the Tebicuari and the fertile plains of the South. A correspondence, conducted with formal courtesy on both sides, has taken place between the Prince and the President, occasioned by the use of the Paraguayan flag in the Brazilian camp, where it was displayed by a native legion in the service of the allies. Lopez complains of this, and threatens to requite it by executing the prisoners of war who may be in his power. The Count d'Eu defends his use of the flag on the ground that the allies are fighting, not against

Paraguay, but its ruler. According to recent information, Lopez has been prevented from carrying out his threat by a noble protest on the part of Mr. McMahon, the Minister of the United States. ("The Standard," Buenos Ayres, June 11th.)

During the month of May of the present year, General Mena Barreto, or O'Barrett, an officer of Irish descent in the Brazilian service, advanced into the interior, and brought back with him a number of Paraguayan families, amounting to about twelve hundred persons, mostly women and children. On his return through a dangerous defile, Barreto was attacked by the Paraguayans, whose artillery was posted on the hills around. The families under his charge were between two fires, and hundreds perished. The Brazilians succeeded at length in driving off their assailants and resuming their march toward the river.

In the course of events upon the La Plata and its tributaries, during the last few years, questions have sometimes arisen between the various governments there and the representatives of the United States. The documents relating to these questions, which we have had occasion to examine, occupy more than four hundred pages. The representatives of our country to whom they chiefly refer are the late General Asboth, Minister to the Argentine Republic, Mr. James Watson Webb, Minister to Brazil, and Mr. Charles A. Washburn, Minister to Paraguay. These gentlemen, by direction of the State Department, repeatedly endeavored to bring about a termination of the war; but their efforts were entirely unsuccessful, and the Argentine Republic even entered a formal complaint against General Asboth, alleging that he had, in his correspondence, "thought it proper to enter into appreciations with regard to the war, to home politics, to the state of public opinion and of the finances of the country, which, he ought to have supposed, had been duly studied and taken into consideration by the Argentine government." To this Mr. Seward very properly replied, "that it is difficult to conduct a correspondence of mediation between belligerents without inadvertently giving offence to one or other of the parties, and that, considering that every care has been taken by the United States government to avoid misapprehension, the Secretary of State begs to be excused from entering unnecessarily into collateral discussion." Mr. Asboth was in-

formed that his conduct was approved, but a word of caution was added against any expression that should give cause of offence to an independent government.

Mr. Webb, our Minister to Brazil, appears often in these documents, in consequence of the difficulty interposed by the allied fleet to the free passage of the rivers Parana and Paraguay. He twice had occasion to demand energetically of the Brazilian government that it should permit a United States vessel of war to pass through the attacking fleet for the purpose of conveying our Minister, Mr. Washburn, to and from the Paraguayan capital. The Brazilians, with some apparent reason, objected to the demand, but it was, in both instances, at length complied with. Subsequently, when two persons connected with the American legation in Paraguay had been forcibly detained by Lopez, Mr. Webb urged upon Admiral Davis an immediate resort to force to procure their release, with an earnestness which, though prompted by honorable motives, went beyond the bounds of customary intercourse between co-ordinate branches of the public service, and drew from the Admiral a reply briefly declining further correspondence. Admiral Davis afterwards, however, under instructions from the Navy Department, repaired to Assumption, and procured the liberation of the persons detained.

It is, however, the correspondence of Mr. Washburn, our late Minister to Paraguay, which presents the most important questions, and sheds most light upon the state of affairs in the country to which he was accredited. We have seen this gentleman coming forward in a manner suitable to the high trust committed to him, to defend against the despot of Paraguay the rights of the Brazilian Minister. We find him afterwards, with the same boldness, giving to oppressed foreigners in Assumption the protection of his flag, the most marked case being that of the acting consul of Portugal, Mr. Leite Pereira, who found an asylum beneath the roof of the American Minister till he voluntarily withdrew from it; and we find him inflexibly asserting the immunities of his embassy for the two persons already alluded to, Messrs. Bliss and Masterman. In the long and excited correspondence on this subject, between the Minister and Señor Benitez, the Paraguayan Secretary of

State, the charge was made, that, together with Bliss and Masterman, Mr. Washburn himself was engaged in a conspiracy against President Lopez. The President's own brothers, his brothers-in-law, and his former minister, Señor Berges, were also implicated. Confessions of some of the accused were produced, to the effect that Mr. Washburn was one of the most active members of the conspiracy, and conducted, through the facilities he possessed as Minister, their communications with the Marquis de Caxias, the Brazilian commander. The assassination of Lopez, it was asserted, entered into the plan, and the American Minister had already received large sums of money, and was to be yet more fully rewarded for his perfidy. What is most extraordinary, Bliss and Masterman themselves, who were arrested by order of Lopez while on their way to embark with Mr. Washburn, finding themselves unprotected in the power of the Paraguayan chief, accused the American Minister, and admitted their own parts in the alleged conspiracy, in testimony given at great length. These statements they afterwards declared to be true in the presence of two American officers, but in the presence also of their Paraguayan jailers, who had not yet transferred them to the protection of the United States. They were also compelled to write letters to friends abroad, to the same effect, admitting their guilt, and expressing the hope that their lives would be spared by President Lopez. It is not surprising that, on these statements of their own, they were received on board the United States squadron rather as prisoners than as guests, although their condition was at length improved by order of the Admiral. On their arrival in this country they submitted a memorial to Congress, relating the circumstances of compulsion under which their self-accusing statements had been made, utterly denying the truth of those statements with regard to themselves and to Mr. Washburn, and complaining of their treatment by the naval officers of the United States.

Mr. Bliss, in this memorial, uses the following language: —

"Suffice it to say that when the repeated application of torture had forced us to subscribe to confessions of our guilt and accusations of Mr. Washburn as the head of a vast conspiracy, we were called upon to put into narrative form these fictitious depositions, which were then pub-

lished as pamphlets by order of Lopez. These pamphlets were written by us while in irons and suffering the same barbarous treatment previously referred to, under the constant direction, supervision, and censorship of one or all of the three priests who constituted the inquisitorial tribunal of Lopez; two of them being *fiscales*, or prosecuting attorneys, and the third *escribano*, or secretary. There was in that so-called tribunal neither judge nor jury, neither counsel nor citation of witnesses for the accused, nor any possible means of defence; nor was any body of laws recognized as authority; and this singular organization was supplemented by an officer whose special duty it was to superintend the application of torture. He also took an active part, in my own case, in keeping watch over the progress of my pamphlet."

Mr. Bliss then states the circumstances under which he was induced to assert before American officers the truth of that account which he now declares to have been false:—

"I had no suspicion of the presence of any other American vessel in Paraguayan waters than the "Wasp," which I was given to understand had come to bring the new Minister to his post. Nothing was said to me of the presence of the Admiral, much less of any demand having been made upon Marshal Lopez for the delivery of our persons, which was represented as being a gracious act of clemency conditional upon our conduct in answering the expectations of our judges. The naval officers alluded to chatted familiarly, smoking and jesting with the other members of this special tribunal, which comprised at this time two Paraguayan officers who spoke English, and the head torturer, who sat directly opposite me, sword in hand, with his warning and menacing gaze riveted upon me. The depositions extorted from me, as heretofore stated, were then read over, occupying nearly or quite four hours in the process, and I was called upon to acknowledge my signatures and to reaffirm my confessions, which were thereupon certified to by the naval officers along with the priests, — the torturer and other witnesses present adding their own signatures. Not a word was said to me by these officers except to ask me my name in a rude manner, and to say, 'Speak in English,' when I recognized my signature for the first time."

Messrs. Bliss and Masterman also state that, when they were forcibly separated from Mr. Washburn, that gentleman told them they might say anything about him which they found necessary for their own safety, as it would not be believed by any one except in Paraguay.

The statement of Mr. Masterman with regard to the tortures he underwent and witnessed is too long for insertion, but we present the following extracts : —

" Without food, and only a single draught of dirty water, I lay on the ground in a state of utter prostration until sunset, when I was ordered to present myself before the tribunal. I walked there, a distance of about half a mile, painfully and feebly, in my heavy irons, the soldier who guarded me thrashing me savagely all the way with a stick, and twice knocking me down, because I could not move faster. Within a copse of trees I found Captain Falcon and a priest ; the former said in Spanish, 'Ah, we have got you at last ! Come, now, confess that you are a conspirator ; that Washburn is the chief of the plot, and that you took refuge in the legation in order to conspire against the supreme government,' or words to that effect. . . . . I replied that I knew nothing of any conspiracy, otherwise than from the depositions of Don Benigno, Carreras, and others, which had been sent from the foreign office to Mr. Washburn, and read aloud to us ; that I had not in any sense taken refuge in the legation ; that I was perfectly innocent of any designs against the government, and firmly believed that Mr. Washburn was also so. He listened to me impatiently, and said in a loud, menacing voice, 'Then you will not confess ; I will see if I can make you.' He called two men, told them to take me outside and apply the *potro*, — literally the rack, but used by him in the sense of torture in general. I silently prayed, while they were getting ready, that help and strength might be given me to bear it unflinchingly, but I had been greatly reduced by ill health and the weary anxiety of the past three months, and feared that in spite of my determination to do my duty as a man and a Christian, I should be soon compelled to give in. At last I was bound hand and foot, and they applied the *cepo uruguayana*, which I need not describe here. The pain was very severe, but I endured it in silence ; the priest meanwhile, in a loud voice, exhorting me to confess and save my life, and perhaps gain honor and rewards from the 'merciful and generous Marshal Lopez.' After a time, which seemed very long to me, I was unbound, and in a few minutes tied up again with the added weight of a third musket ; my lips were badly cut against my teeth, and the blood nearly choked me ; and when the thongs were tightened I fainted from the pain. I was lying on the ground when I recovered consciousness, so exhausted that I felt that I could hold out no longer, preferring death as a confessed conspirator to the repetition of such terrible suffering."

" The negro was tortured for a long time, as his shrieks and cries of

'No sé nada,' and prayers for mercy, which I plainly heard, made evident to me; for he, poor fellow, had no idea of the charges against his master and the rest, and could not save himself by lying, if he would."

"I managed to speak, unobserved, to Dr. Carreras. He said, 'Has Mr. Washburn gone?' I replied 'Yes,' and added, 'How could you tell such falsehoods about him?' He removed some dirty rags from his hands, and showed me that the first joints of his fingers had been crushed and were still suppurating. He had also a deep, unhealthy-looking wound extending across his nose. He held out his mangled hands and said, 'That terrible Father Maiz tortured me on three successive days, and then crushed my fingers with a hammer, as you see. Have you confessed?' 'Yes,' I replied, sadly. 'You have done well; God help us!' While we were resting I managed to speak to him again, and asked him how much money he had said in his depositions he had received. He told me $15,000, and added, 'Lies, lies, all lies!'"

"Before starting, Mr. Bliss and myself were temporarily removed to a hill-top, where we found Don Venancio and Don Benigno Lopez, Don Gumesindo Benitez (the latter two in irons), Don José Berges, Captain Fidanza, Doctor Carreras, and Señor Leite Pereira. An immense crowd of prisoners accompanied us on the march, and I witnessed such scenes of horrible cruelty during that terrible journey that I feel no description can picture them. It must be remembered that nearly all the prisoners were fettered; that the road was rough and hilly, and the heat suffocating. I saw feeble old men, sinking under the weight of their irons, flogged with sticks, or cut down remorselessly by the swords of the officers, if they did not move fast enough. I saw tender women, belonging to the best families in Paraguay, toiling onward, barefoot and in fetters, and exposed to every indignity. I saw an officer stamping on the head of a tall, gentle-looking old man, who had fainted from exhaustion, till his white hair was dabbled with blood. And I saw others, too fatigued to stand, dragged along by their feet, and then thrown, covered with blood and dust, into the carretas."

"On the 23d of September I saw Don Benigno, the younger brother of Lopez, put to the torture, and on the 27th, Dr. Carreras and Señor Benitez led out to execution."

The accounts given by Messrs. Bliss and Masterman of the tyranny of Lopez receive melancholy confirmation from the pamphlet published by order of the Argentine government, and

entitled "Papers of the Tyrant of Paraguay, taken by the Allies in the Assault of December 27th, 1868." Besides these papers, it contains the testimony of numerous Paraguayan officers, prisoners of war, as well as introductory and closing portions by the Argentine authorities.

Of the stern discipline of the Paraguayan armies an illustration is given in a decree taken from an order-book of Lopez, that whenever a soldier deserted, his two immediate comrades, (*costados*) should receive each twenty-five blows, the corporal forty, and the sergeant fifty. It is supposed that now the punishment is still heavier; for a deserter lately exclaimed with a sigh, "My two poor comrades! they have shot them by this time!"

The first Paraguayan document published is a letter to Lopez from the former Vice-President, Sanchez, in which the latter, at eighty years of age, endeavors to exculpate himself from the charge of having been under the influence of Don Benigno Lopez, who was suspected of conspiring against his brother. The exculpation was vain. The body of the aged statesman was found in the ditch where it had been thrown, riddled with balls and disfigured by torture.

Colonel Martinez, who formerly commanded the outworks of Humaitá, testifies that, having capitulated to the allied army, and thus become a prisoner of war, he has heard since, from other prisoners, of the cruel treatment, and finally of the execution, of his wife, by order of Lopez, although she was nearly related to the tyrant. Colonel Martinez gives instances of the execution of soldiers by Lopez without trial. This was the fate of Lieutenant Ybañez, a brave officer, for saying that the enemy were strongly intrenched, which Lopez interpreted as cowardice. This account of his severe treatment of his own soldiers is confirmed by many of the papers which are published. A system of espionage prevailed throughout the army, and the malicious accusation of a superior by an inferior might subject the person accused to degrading if not to capital punishment. Other papers show the absolute command of the government over the families of its people. Nine hundred women, and afterwards eight hundred more, are ordered to be sent beyond the mountains and employed in agriculture.

The most remarkable of these captured documents, however, is the Diary of General Resquin, a journal of the disposition made of prisoners under his charge at the camp of San Fernando, from May 31st to December 14th, 1868. Of these "tables of blood" the result is that four hundred and thirty-two were shot (*pasados por las armas*), five bayoneted, one lanced; one hundred and sixty-seven died in prison; two hundred and sixteen were taken out to work in the trenches; two (Bliss and Masterman) sent beyond the territory; one sent up to the capital; and ten released. Of the victims, most are spoken of as traitors, but many are named as prisoners of war. Of those shot, two hundred and eighty-nine were Paraguayans, one hundred and seventeen foreigners from various countries, and twenty-six without local designation. In this list appears the name of Gumesindo Benitez, the Minister through whom the charge of conspiracy was made against Mr. Washburn; and on the same day was executed Dr. Carreras, whose testimony, procured by torture, Benitez had used in that correspondence. Among the few released is the name of Venancio Lopez, one of the brothers of the President. The remaining brother, Benigno, was less fortunate. According to the testimony of many witnesses, he was put to death, as were the two brothers-in-law of the despot, General Barrios and the Treasurer, Saturnino Bedoya, and the Minister Berges, who preceded Benitez in the office of Foreign Affairs.

But we must hasten on. Passing over the accounts of many other witnesses, we find the most complete development of the systematic barbarity of Lopez in that of Captain Matias Goiburú, himself an agent in the cruelties he describes. If this fact should create suspicion, his evidence is confirmed by that of Don Bartolomé Quintanilla, Don Teodoro Sanchez, and other witnesses. Goiburú declares "that in the combat of November 3, at Tuyuti, there were taken from two to three hundred prisoners, of whom more than one hundred were tied up and whipped with the doubled lasso, and forty or fifty shot," under pretence of an attempt to communicate with the Brazilian General, Porto Alegre.

"He knew these things because he, the same affirmant, had been charged with the custody of these unfortunates, and more than once

with heavy grief of his heart he had to witness and even to order punishments which humanity and civilization condemn."

"That the treatment received by the prisoners in the times later than that which has been mentioned has become continually more cruel and barbarous, and that in proportion as the position of Lopez has become more difficult, he has multiplied the punishments and diminished the food of the prisoners and of those in charge of them. That when Lopez abandoned Humaitá, the officers who guarded the prisoners had orders to shoot any who should yield to exhaustion during the march, and that it was certain that upon the marches made from San Fernando to Lomas there were shot or lanced various persons who had the misfortune not to be able to keep up, oppressed with misery by sufferings and by illness."

He gives a long list of persons of various countries who were put to death or who died of their sufferings. He says that there were many others whose names he did not know, "and that thus have perished all the prisoners of war from the allied army." He knows all this because he has himself been fiscal (accuser or examiner) in various causes, and he declares that the fiscals worked under the iron pressure of Lopez, having always at their side especial inspectors who directed them what they were to do. Of those executed, he asserts, the property was confiscated by Lopez.

"With very rare exceptions, Lopez has sacrificed the best and most respectable part of the population of Paraguay. Sometimes he went through the forms of a trial, from which resulted what he desired; but he almost always scourged or shot eminent persons without form of judgment. Of his own family he shot his brother Benigno and his two brothers-in-law Barrios and Bedoya, and, in fine, this monster would have exterminated all the inhabitants of Paraguay, if time had been given him to effect it."

He testifies that Doña Juliana Isfran de Martinez was taken to the capital and tried before Captain José Falcon and Manuel Maciel. She was told that Padré Barrios and Dr. Cespedes had testified against her, and was asked what her husband had said to her respecting the conspiracy. She replied that he had said nothing on the subject; that her husband was incapable of treason, and of doing anything contrary to the laws of honor. Lopez, who interfered personally in all such cases, commanded her to be scourged to make her confess. As this

barbarity did not subdue her, he repeated it, and then ordered the torture of the *cepo colombiano*. The poor lady exclaimed that she was innocent, and begged them to put her to death; but Lopez ordered her to be told that, if she did not confess, she should die under the torture, and that this was the chastisement to which her obstinacy was entitled. The witness declares that he received orders from Lopez to treat her with the most revolting cruelty, — orders which he was obliged to fulfil in part, yet softened as much as possible, with great danger to himself; but that Lopez removed the lady to the charge of another person, before whose cruelty he supposed that her firmness at length gave way, and she confessed all that was required, for she was soon after executed, and her last tormentor was rewarded with promotion.

Two other names are given of women who were put to death; of one of whom the following is related: —

Leite Pereira, Vice-Consul of Portugal, — the same who had been for a time protected by Mr. Washburn, — was compelled by torture to accuse Doña Dolores Recalde of having aided in conducting the correspondence among the revolutionists. Afterwards, his death approaching, he was compelled by conscience to recant, and ask her pardon for the wrong he had done her. "This girl, whose sufferings and bravery had moved all who knew her situation, refused to pardon what she called the infamous cowardice of Leite Pereira, and, borne down by the declarations he had made, she was executed without pity."

Mr. Washburn himself, it may readily be supposed, speaks in no measured language of the despot from whose power he escaped with difficulty. The following are extracts from his letter to Mr. Seward, dated at Buenos Ayres, September 26, 1868: —

"I have been completely run down by people who have come to inquire of me in regard to their friends in Paraguay. I regret that I have but one answer for them all: 'Lopez has killed your friends, or holds them in prison, loaded with fetters.' I fear, too, that none of them will escape with their lives."

"I am confident there has never been any conspiracy, for I do not believe that under the system of espionage that prevails in Paraguay, and the universal distrust that everybody has for everybody else, there are three men in the country so foolhardy as to engage in anything of

the kind. Lopez, however, in his policy of extermination, and of leaving no one to testify against him, has declared that there is, and seems to imagine that confessions extorted by torture will justify him before the world in executing those who have made them; or, rather, those whom he declares to have made them."

In the "Correspondencia Diplomatica" we have, at greater length than in our Congressional documents, Mr. Washburn's letter to Mr. Stewart, the British Minister at Buenos Ayres. It contains the following passage referring to Lopez: —

"He succeeds entirely by means of fear; and, with the exception of a few who lend themselves to be voluntarily the agents of his cruelties, such as his mistress, his bishop, Luis Caminos, Sanabria, and a few others, who have shown great ardor in executing his sanguinary projects, there is not a man, woman, or child, not even excepting his mother, sister, or brothers, who would not give thanks to God if he would take him to another world, where his actions would receive a more adequate recompense."

Mr. Washburn goes on to account for the readiness of the Paraguayans to face death in battle by their fear of their tyrant. The second line, he says, have orders to shoot down every soldier that attempts flight or desertion; and if they neglect this duty a similar fate awaits themselves.

According to Dr. Stewart, an English physician, and surgeon in the army of Lopez, the names given in the order-book do not by any means cover the numbers who have perished by the cruelty of that despot. Of the 600,000 inhabitants of Paraguay, he says only about 80,000 are left, of whom 40,000 are women and children; and that 180,000 males have perished.

President Sarmiento writes: —

"Lopez has killed all his prisoners, either by execution, starvation, or torture; among these were his own Cabinet Ministers, the bishop of Assumption (tortured and then murdered), the wives of all whom he could not capture; foreign, native, and Argentine merchants, and the husbands of two of his sisters. The details of these acts and the manner of execution make one shudder with horror. He sent for his sisters to come to his camp, and after having instructed them what to say, their husbands were called in. 'Do you know this man?' asked Lopez of one of his sisters. 'No, I do not know him.' The drama concluded by the husbands being shot in the presence of their wives!"

The withdrawal of Mr. Washburn was soon followed by the arrival of his successor, Mr. McMahon. This gentleman reached Paraguay early in last December, by the same vessel which brought away Messrs. Bliss and Masterman. Mr. McMahon may have believed the story of a conspiracy, which those unfortunate men confirmed in the presence of our naval officers; or he may have thought it best, now that their freedom had been secured, not to enter into any questions respecting the past. He remained near the Paraguayan government when the successes of the allies compelled its removal from the coast; and the story was circulated in Buenos Ayres that Lopez had by will appointed the American Minister guardian of his illegitimate children. Among the entertainments of the carnival in that city was a tableau in which derisive allusion was made to this rumor. The interference of Mr. McMahon to secure the safety of Argentine and Brazilian prisoners is the best answer to this insult.

Among the first acts of the administration of General Grant was the recall of Mr. McMahon. It attracted notice that this was issued during the few days when Mr. E. B. Washburn, brother of the former Minister to Paraguay, held the office of Secretary of State; and an unworthy motive has been by implication ascribed to that gentleman. But there were reasons enough for the withdrawal of our Minister from Paraguay, when there were no longer North American interests to defend, and when the presence of such a Minister could but give protection to a tyrant among whose recent acts had been the torture of two members of the American legation.

We have been personally assured by one who escaped from the power of Lopez that his government before the war, though despotic, was not sanguinary. We learn from the same source that in the early period of the struggle the Paraguayans were full of enthusiasm for their Marshal President, who then seemed entering on a career of conquest. As reverses came, and the rash enterprise which ambition had prompted threatened ruin, it would seem that the tiger awoke in the heart of the baffled invader. He first showed his rage in the treatment of his prisoners, and of some of his own officers, — General Robles, for instance, who was shot by his order for retreating from Corrientes.

Afterwards, as the war continued with its incalculable losses and miseries, while by the manifesto of the allies it appeared that the removal of Lopez would restore peace, we cannot wonder if among the chief men of the nation a plan was formed, probably to compel his abdication in favor of one of his brothers. The discovery of this conspiracy, if it deserves that name, excited the despot to the most violent measures; and, according to the testimony of many witnesses, numbers of people of the highest rank, including his own brother, fell victims to his revenge and fear. This supposition appears to us more probable than that the conspiracy was a mere fiction of Lopez himself, invented that he might enrich himself with the spoils of victims whom he knew to be innocent.

According to accounts just received, a provisional government for Paraguay has been established at Assumption, under the protection of the allies, and their forces are advancing successfully. Other accounts, however, represent the Paraguayans as still strong in their mountain fastnesses, and in control of a fertile country, which will afford them ample means of support through a prolonged resistance. For this brave and unfortunate people we feel pity and respect; and we deplore the continuance of the war, not only on their account, but also in the interest of the neighboring nations, — of Brazil, where the designs of its benevolent Emperor for the abolition of slavery are thus greatly impeded; of Uruguay, which ought at length to find rest from those commotions which have marked its unhappy history; and of the Argentine Republic, which has wisely chosen for its guide a chief enlightened by the best influences of Europe and of the United States. But the contest must now go on, and our hope is that it may soon terminate in the overthrow of Lopez. To this result, wisely or not, three nations have pledged their honor; and with every allowance which can possibly be made for exaggeration and falsehood in the charges against the President of Paraguay, we must regard him as guilty of kindling, from ambitious motives, the war which now rages around him; and as identified with a system of terror, espionage, and torture, the more revolting because it falsely claims the name of republican.

S. G. Bulfinch.

Art. VII. — CRITICAL NOTICES.

1.— *Chips from a German Workshop.* By Max Müller, M. A., etc. Vol. I. *Essays on the Science of Religion.* Vol. II. *Essays on Mythology, Traditions, and Customs.* New York: Charles Scribner & Co. 1869. 12mo. pp. xxxv., 374, and 402.

Our notice of this important work, which was published in England not less than two years ago, comes a little late. But we were willing to await the time when the appearance of the American (authorized) reprint should have put it in the hands or within the reach of more of our readers. Everybody now knows it, at least by repute, as one of the striking books of the decade; as excelled in interest by none of Professor Müller's former publications, great as has been the acceptance which these have won. Their author has so gained the ear of the reading public, that anything which he may send out is sure of a wide circulation and the most favorable consideration. We rejoice that the present volumes come forth with this prestige, for they are worthy to be extensively studied, and cannot fail to exert a valuable influence in moulding the views of thoughtful men. They are in advance of the general opinion, but in the direction in which that opinion seems to be moving. The mode of their usefulness is twofold: as they furnish authentic information respecting the religious ideas and mythical fancies of periods and races lying outside our European Christian civilization; and as they instigate us to view these in their right relation to one another and to Christianity. No one living, probably, is better qualified than Professor Müller for the task which he has here undertaken. His specialty, the study of the Veda, sets him in the very heart of the myths and creeds and rites of the Indo-European peoples, and hardly any one has studied them more deeply, or in a more original spirit, than he. The circle of Vedic divinities and their Greek correspondents are his most engrossing theme; but he is hardly less full upon the subject of the Zend-Avesta; while the monotheism of the Semites, the dry utilitarian precepts of Confucius, the dizzying doctrines of Buddhism, and the simple beliefs of half-civilized American aborigines, receive also not a little of his attention. Such trustworthy and comprehensive information, so attractively presented within so brief compass, is not elsewhere to be found by the student of the general religious history of mankind. Made up, as it is, of independent essays, collected and reprinted with little change, the work has not the order and completeness of a systematic treatise; but it is more easily read than such a treatise would be;

each essay is a whole in itself, and not long enough to fatigue the attention of any one who is capable of deriving profit from the instruction it offers. There is also, it must be confessed, some repetition, which we might wish that the author had been willing, by a little additional labor in rewriting, to avoid; yet the fault is one of trivial consequence in comparison with the solid merits of the work. So large, and so much the most important, part of the two volumes deals with religions, that the work as a whole is fairly to be reckoned as religious, although only the first volume purports by its title to be such. The title, by the way, is not quite happily chosen: the preface alone is of the nature of an "essay on the science of religion"; the rest are rather essays on specific religions, as contributions to a science of religion. This science the author would fain see constructed after the model of the science of language, and founded upon a comparative study of all the religions which prevail or have prevailed upon the earth, and upon an understanding of them as the diverse products and expressions of one universal religious faculty or instinct. He pleads with much fervor and eloquence for the free and impartial submission of all religions, Christianity included, to this scientific investigation, this historical and comparative examination; urging in its favor the authority of the old Christian fathers, and the advantage certain to accrue to us in the better comprehension and estimation of our own religion, not less than of those with which it is compared. He earnestly protests, at the same time, against the prevailing judgment of heathen religions as products of human depravity, sacrilegious devil-worships, worthy of unmixed condemnation; and insists upon their claim to be regarded as earnest, though erring, attempts on the part of short-sighted humanity to solve the same great problems to which our own faith is an answer. Professor Müller fully recognizes the difficulty of persuading the great body of those who hold the Christian religion to let it become the object of a scientific scrutiny, along with the rest, as if it were of like substance with them. Their feelings are almost invincibly opposed to such treatment. This is no product of the religious instinct, but a body of absolute truth, supernaturally revealed, and obtainable in no other way. Nor are Christians alone likely to be found impracticable. The sincere advocates of every creed under heaven will insist on making a similar reservation. You may analyze and compare other religions as you will, tracing their various features to certain traits of human nature, or influences of human history and institutions; but each one's own faith is something of a different class. The Moslem has authority for all that he believes, in the infallible inspiration of his prophet; the Brahman claims that his Veda has existed from all eternity, and is itself a foundation of truth,

undemonstrable and unassailable; the Buddhist vaunts the superhuman wisdom and power of the dreamy ascetic who taught him to aspire to extinction, — and so with the rest. Only the Chinese, who have never arrogated to their great teacher anything but superior insight and purity of heart, will be liberal enough to join heartily with the votaries of the new science, along with those who elsewhere may have risen, or fallen, into a Chinese indifferentism. It is in vain to tell each one that, if his creed really contains the essence of divine wisdom, the most searching and impartial study and comparison will only bring its superiority more clearly to light: he will see an indignity in the very quest.

But even those who accept the impartial comparison of all religions have room to doubt the feasibility of a science of religion. Religion is so intricately intertwined with the whole of human thought and action that it hardly admits of being separated and considered apart, completely and distinctly. Its substance, — human opinions and convictions, — is of too subjective a character to be easily and safely handled ; and the creeds which strive to express it, the rites and observances which it prompts, are wont to be, as our author well shows, untrustworthy witnesses to its true character. They are very unlike the words and forms and phrases of which human speech consists : these have enough of the concrete and objective about them to bear scientific treatment. A science of religion seems almost as little to be looked for as a science of human opinion, or of manners and customs.

These, it may be alleged, are merely difficulties in the way, and the progress of study and of the enlightenment of general opinion will show them not to be insuperable. But we do not see even the possibility of a science of religion upon just the basis which Müller would establish for it. If the bulk of human religions have their origin in the universal facts of human nature and the variety of human character and circumstances, then something like a scientific exposition of their rise and development may be possible ; not otherwise. According to what may be called the naturalistic view, now accepted by many of the students of human history, the religious feeling is called forth in the first instance, and guided in its growth, by men's recognition of a power without them and infinitely superior to them, manifested in the phenomena of the world which surrounds them ; by their irresistible disposition to attribute to this power an anthropomorphous form or forms, paralleling its action with that which they best understand and see to be most efficient within the sphere of their own consciousness and observation ; and by the attempt to settle their own relation to it, and put themselves in communication with it, in order to the obtaining of good and the averting of evil. Man is the only creature capable of forming the fundamental conception

of something in nature higher and greater than himself, and of feeling the desire to penetrate its secrets; but he acquires this capacity along with his rise above his primitive and natural condition, his utterly savage state. There are races, even now, so sunken and absorbed in the lowest wants of their animal nature, that no religious idea has ever dawned upon their minds, any more than the idea of beauty, or the love of virtue. In different races such ideas make their appearance at different epochs of mental progress, and assume a very diverse form, with corresponding influence upon life and character. With some, religion is from the outset an ennobling element; it elevates and makes them happy; with others, it begins and remains abject and cringing; it is full of dread, like the fear of children in the dark; it expresses itself in deprecatory rites, and is fertile of superstitions of every kind. On the whole, it follows a certain direction of advance; it makes its way from blinder and more childish views to such as are clearer and stronger; it begins with finding gods and demons everywhere, in its naïve ascription of each class of phenomena to a separate agency; it tends, where character and circumstances favor, toward an apprehension of a unity in all the varying phenomena of the universe, and a oneness of their creator and manager, — that is to say, it tends from polytheism toward monotheism.

Now it appears to us that no one who does not take something like the view thus set forth of the rise and growth of the heathen religions has any right to talk of a science of religion at all; and it is at this fundamental point that we deem Professor Müller's science wanting in soundness and consistency. His religious philosophy presents a curious analogy with his linguistic philosophy. In language, he adopts and teaches the current methods of historical research, treating human speech as the product of a continuous process of development from elements the most simple and formless, carried on along with its use by men who have spoken it, until he gets back to the very beginning: there he assumes a miracle, not precisely a scriptural, but a kind of natural or materialistic miracle; namely, an original instinct, different from anything which men have nowadays, vouchsafed for the express purpose of setting in motion the process of linguistic development, and withdrawn when it had answered that purpose. So also, at the very fountain-head of all religion he finds — we must not say an instinct, since he criticises and rejects that word as used by Renan, but what is equivalent — an intuition and a feeling, "an intuition of God and the immediate feeling of dependence on God," which "could only have been the result of a primitive revelation." This intuition he regards as neither monotheistic nor polytheistic; and its natural expression is

simply the dogma, "God is God." Elsewhere he calls it a "feeling of sonship," and qualifies it as *henotheistic*, that is to say, as not apprehending or believing in more gods than one, although at the same time not consciously holding the unity of God.

So far as this is intelligible to us, it is altogether unsatisfactory. If Müller means simply to maintain that before the distinct and conscious recognition of a plurality of gods there must have existed in the minds of untutored men a dim and undefined apprehension of an extra-human force or forces at work in the world about them, he is only presenting in a somewhat peculiar form the prevailing view stated above. But his phraseology does not fairly imply this; it seems hardly accordant with any other theory than that of an original paradisiac condition of man, as a being with powers miraculously developed and knowledge stored up by superhuman means, instead of such a one as any of us might have been if flung at birth into a desert land and nurtured by wild beasts. We do not suppose that our author holds such a theory, although he nowhere that we have noticed expresses himself distinctly either for or against it. Doubtless he believes in a general upward progress of mankind since the earliest ages, in the gradual development of powers at first possessed unconsciously, in the accumulation of knowledge and the acquisition of the power to use it and reason upon it. That the untaught and undeveloped generations of men were capable of an intuition of God and a feeling of sonship, seems to us quite inconceivable: we fail to see upon what good ground the assumption can be maintained as plausible. So far as Müller himself attempts to support it by argument and illustration, he is not very successful. Thus, to prove the priority of monotheism, he alleges the fact that "in no language does the plural exist before the singular." But the same fact, it is evident, would equally prove that the existence of one sole tree or bird was believed in before that of many trees or birds; that men were monodruists and monornithists before they became polydruists and polyornithists. If we do not misunderstand him, he would account for the separation of one God into many gods in such ways as this: Men first said *tonat*, *βροντᾷ*, meaning "*he* thunders," that is to say, he, the one God. Then, since the thunder came from the sky, they occasionally said also "the sky thunders"; and this mode of speech grew into a habit, so that finally "he" and "the sky" became irretrievably mixed together in their minds, "by the almost irresistible force of language," and they confusedly looked upon the latter as one of the names of the former. And, having committed similar confusions in speaking of other manifestations of the one supreme deity, they found themselves all at once in possession of a set of names for him,

as sky (*Jupiter*, Ζεύς) and so on, which they imagined to be names of so many distinct beings. And so they fell into polytheism.

We should be very glad to make an exposition of this peculiar theory which should be less implausible and even self-refuting, but we know not how to do so. It attributes to words a kind of power over the mind which we can only compare to jugglery, and which we cannot but regard as inconsistent with any sound view of human speech. It is not, however, altogether at variance with opinions respecting language which our author has elsewhere expressed. He inclines generally to regard words as the masters rather than the servants of ideas, holding that the former condition the latter, instead of being produced for their service, and that no abstract conception is for a moment possible without a vocable expressing it. Thus, also, in the essay on "Semitic Monotheism," from which we have taken a part of the expressions quoted or referred to above, he combats with much vigor Renan's theory of an original monotheistic tendency in the character of the Semitic races (Hebrews, Arabs, etc.), and ascribes whatever may be peculiar to them in this regard to the peculiarity of their language, the radical meaning in their words being much more persistent than in those of other tongues, — a Semitic epithet remaining an epithet merely, while in Indo-European languages, for example, its origin is readily forgotten, and it assumes the value of a specific designation. The Semite could never be cheated into imagining that, in the phrase Ζεὺς βροντᾷ, Ζεύς signified a being instead of a part of the material creation, because its appellative meaning, "the bright," or "shining," would not be wholly lost from memory. This characteristic feature of Semitic speech is very suitably brought in as an element in the discussion; but most scholars, we are persuaded, will think that Müller overestimates its importance, and that his solution of the problem is, to say the least, not more satisfactory than that of the author he opposes. The Semites have managed to find real names for all the objects they have wished to designate; and if their mythopœic or theopœic tendency had been as pronounced as that of the leading Indo-European races, we see no reason to believe that they would not have fabricated as many myths, and believed in as many gods. In fact, as our author points out, if all the Semitic races are taken into view, it is found that they have been polytheistic enough; and he ascribes their exalted doctrine of one God directly to the one man Abraham, whom he believes to have received it by divine revelation. So that, after all, it appears that the original intuition of one God, even when aided by the unyielding processes of Semitic word-formation, has not been able to furnish the later world with a single monotheistic religion. It is not without show of reason

that Müller rejects Renan's theory of a Semitic "instinct" for monotheism, as refuted by the general Semitic worship of Baal, Moloch, Ashtaroth, and the rest; but what shall we think of his own universal "intuition" of humanity, which in every race under heaven has been blinded and baffled by its own blundering attempt at expression, and whose appointed office has had to be filled by a later superhuman agency?

The vexed question of Semitic monotheism is much too recondite to be followed out here; we can only touch upon it in passing; and would say to our readers that two more eloquent and interesting articles than those of Renan and Müller upon it are not easily to be found in the whole range of discussion upon this class of subjects.

There is yet another point, closely connected with those already treated, in regard to which our author appears to us not less guilty of exaggerating the influence of expression; and it is a point of prime consequence. Mythology, not less than polytheism, is laid by him at the door of language. His views as to the relation of myths and words are drawn out more fully in the second series of his Lectures on Language than in the present work; yet the second volume of Chips contains his celebrated Oxford Essay on Comparative Mythology, which sketched the outline of his whole system, and even brought forward many of the details which have attracted the attention of scholars, and led to no small comment and controversy. He goes so far as to declare mythology a kind of "disease of language," and to maintain that men were led along into mythic fancies, as into a belief in many gods, without their own knowledge and almost against their own will, by the overpowering influence of the phrases they used. It may be that his expressions do him partial injustice, and that his views are not so different from those of other scholars as they appear to be; but we are persuaded that he at any rate presents the subject in a false light, and lays an unsound and untenable foundation for the whole study of myths. We at the present day say, "The wind dashes the rain against the house," "The cloud darts lightnings at the earth," and so on, in what we call figurative or poetic phrase, without running the least risk of sliding away into a belief that the wind and cloud are superhuman beings, acting after the manner of men. Why is this? Because, says Professor Müller, words have less power over us than over the ancient generations; because our thought is withered; because our language is not suffering under that specific disease; and more of the same sort. But in this he is himself a mythopœist. One of the essential parts of myth-making is the substitution of an analogy for an explanation. To express by a figure something which is only half-understood or wholly

obscure, then to dwell upon the figurative expression as if it were a true definition, and let it hide from sight the thing meant to be expressed, is a good process in mythology, though not in science. What is the power of a word? A word is nothing but the sign of a conception: the only force in action is the wind which forms the conception, and the word is used as its sign. We are saved from making gods of the wind and cloud by the fact that we have long since left behind us that stage of development in which we inclined to see in the works of nature the acts, and effects of acts, of beings similar to men. This inclination, now, seems to us to be incontestably the true mythopœic force, and it should receive the first place and consideration in all theoretic discussion of mythologic fancies. The linguist may then go on to show how designation by a word is an important step in the process of personification, how it constitutes an external support for the conceptions to cling to, and furnishes the means whereby the figurative statement is handed down more faithfully than its explanation; so that the two are finally divorced from one another, and there remains a myth, with its proper meaning unintelligible to those who report and credit it. Thus the study of language is proved to have a most important bearing upon that of mythology, although not, as our author is inclined to claim, its actual foundation.

As regards the details of his mythological investigations, it is well known that Müller is at variance with many of the best specialists in this department on the continent, who regard a part of his comparisons and explanations as fanciful and erroneous, and his etymologies as forced. Especially, they refuse to follow him in his identification of almost all mythic figures with the sun or the dawn, and his explanation of numberless myths as growing out of the relation of those two manifestations. Whether, however, he be finally proved wrong or right, it is certain that he has struck a very productive vein and worked it in a most ingenious manner, and that the views he has suggested and the discussions he has stirred up cannot fail to promote the rapid advancement of the study of primitive religions.

The manner and style of these essays of Müller, as of his larger and more serious works heretofore published, are worthy of high praise. No English author in this department has a greater power as a writer of English than he; none writes with more fervid thought or more genuinely eloquent expression. Of course, the essays are not of entirely equal merit in these respects; and it should be especially noted that one who commences his perusal of the work with the first essay in the first volume, the author's lecture at Leeds on the Veda, will gain a too unfavorable idea of the whole, of which it is the heaviest and least at-

tractive portion, though replete with valuable information. The same paper exhibits, to our apprehension, a rather marked tendency to put its author forward as *the* editor of *the* Veda, instead of *an* editor of *a* Veda. The same tendency appears here and there in other essays. That the Rig-Veda is by far the most important work of its class, no one will deny; but this does not justify the assertion that the rest are all of a merely liturgical character, and have no value independent of this one. And if he had made the good people of Leeds fully understand that the bulky quarto which he was at the pains to carry along and exhibit to them contained only about one part Veda and four parts modern Hindu commentary, of disputed worth, they might not have opened their eyes quite so widely with admiration.

Professor Müller informs us that the present volumes contain only a selection from his fugitive writings on the two classes of subjects indicated. The first includes at least one essay, which we greatly regret that he did not class with those destined to oblivion. We mean that upon the Aitareya Brahmana of Professor Haug. It is in all respects unworthy of him, being an unreserved and uncritical encomium of a work which, along with great merits, has some striking defects, shows signs of hasty preparation, and unduly depreciates the labors of others in the same field. Nor is its inclusion recommended by any interesting discussion of points of general importance contained in it, or by sound and instructive views upon the period of Hindu antiquity to which it relates, while it is especially objectionable on account of the note which its author has added at the end.

In the article as originally published (Saturday Review for March 19, 1864), Professor Müller had been ill-advised enough to insert an attack upon his fellow Sanskritists, the collaborators in the great Sanskrit lexicon published at St. Petersburg, as having formed a mutual-admiration society with the intent to "sing each other's praises in the literary journals of Russia, Germany, and America," and to "speak slightingly" of all outside of that circle. What had happened to call forth this accusation, it is difficult to see; unless perhaps that more than one of the scholars referred to had recently (without any apparent or known concert) joined in defending the lexicon and its authors from a very violent and unjust attack made upon them. At any rate, Dr. Haug (who has quite enough merit to stand alone, and can afford to invite searching criticism instead of indiscriminate commendation) was patted on the back, and assured that, if his book should be spoken of unkindly "in the journals of the Mutual-Praise Society," this should have no effect upon the opinion of anybody whose opinion was worth having. In the Chips, now, Müller has omitted the offensive paragraph;

but he has appended to the essay a note which, instead of mitigating, has trebled the original offence. He first explains the omission, intimating the nature of the accusation made, and averring that he did not originate it, but merely repeated it from others, being convinced that there was foundation for it. He represents it as having been met "by a very loud and boisterous denial." He is sorry if he has given unnecessary pain by what he has done, and hopes that in future no reason for similar complaint will be given; if that result is produced, he will try to bear like a martyr the wrath and resentment which he has provoked. We are at a loss for words to characterize the cool effrontery of this paragraph. Its tone of magisterial assumption is not easily to be paralleled. Müller says, in effect, that a parcel of naughty persons have been caught in their naughtiness; that he has administered to them deserved correction, under which they have cried out lustily; that he is grieved at having had to hurt them so much, and make them so angry; but comforts himself with the belief that it is for their good. And this to men some of whom can show services to Sanskrit literature superior to his own, and whose reputation for single-mindedness and candor is, to say the least, not less than his!

As regards, indeed, a reputation for fairness and candor, there are implications and insinuations in this note which are not calculated to be of service to its author. Look, in the first place, at the "very loud and boisterous denial." It is a pity that we are not informed where such a denial is to be met with; we suspect it to be a figment of Professor Müller's lively imagination. An anonymous criticism in a periodical so little famed for impartiality and leniency of judgment as the Saturday Review was not likely greatly to disturb the peace of whomsoever it might be aimed at; and to those who recognized in it the hand of the Oxford Professor it was doubtless more worthy of attention as an illustration of personal character than in any other way. We are not aware that any one ever took public notice of it, excepting Professor Weber of Berlin. This eminent scholar, being himself the butt at which both Haug and Müller had chiefly aimed their arrows, could hardly remain silent without seeming to confess inability to repel the accusations laid against him; accordingly, in his *Indische Studien* (IX. 2, 1865), he reprinted the article, side by side with another very able and trenchant criticism of Dr. Haug's book, written by a Hindu and first printed in India, for the purpose of contrasting the learning and spirit of the two critics, — much to the disadvantage of the Anglo-German; and then, after a few strong but dignified words in answer to the latter's insinuations, he proceeded to a very detailed and careful examination of the work which Müller had volunteered to guarantee especially against any

attack he might make upon it, — discussing it with a fulness of erudition certainly not at the command of any other European scholar, doing justice to its solid merits, but also pointing out, without passion and without carping, its errors and defects; thus furnishing a running commentary upon it of the highest value, and without the assistance of which no unpractised student should venture to use the work at all. This was Weber's "denial": from the way in which Müller describes it one would infer that it must indeed have rung terribly in his ears.

Again, the charges of "literary rattening" which our author says that he merely alludes to, and of which he shifts the burden to Dr. Haug's shoulders, are not to be found in the latter's pages at all; they appear rather to emanate from no other person than the scholar whose attack upon the St. Petersburg lexicon was the occasion of all the after-trouble. So that the plain history of the affair seems to be this: some one falls fiercely upon the work of a company of collaborators; they unite in its defence; thereupon the aggressor reviles them as a mutual-admiration society; and Müller repeats the accusation, giving it his own indorsement, and volunteering in addition that of another scholar.

Once more, Müller refers his readers, if they are curious to see the expunged paragraphs, to the *Indische Studien*, where, he says, the review may be seen "reprinted, though, as usual, very incorrectly." It is strange that, writing especially for Englishmen, he does not send them rather to the place of original publication; apparently, he could not resist the temptation to cast in passing an additional slur upon the man whose denial had seemed to him so boisterous. In this, however, he was too little mindful of the requirements of fair dealing; for he leaves any one who may take the trouble to turn to the *Indische Studien*, and compare the version there given with that found among the Chips, to infer that all the discordances he shall discover are attributable to Weber's "incorrectness"; whereas they are in fact mainly alterations which Müller has made in his own reprint; and the real inaccuracies are perfectly trivial in character and few in number, — such printer's blunders as are rarely avoided by Germans who print English, or by English who print German. We should probably be doing Müller injustice if we maintained that he deliberately meant Weber to bear the odium of all the discrepancies which a comparer might find; but he is equally responsible for the results, if it is owing only to a careless spitefulness on his part.

We regard this note as by far the most discreditable production of Professor Müller that has ever come under our notice; the epithet "outrageous" is hardly too strong to apply to it. If this is to be his

style of carrying on a literary controversy, he cannot much longer claim to be treated with the ordinary courtesies of literary warfare.

It is also not quite fair and above-board that in the body of his article he notes with complacency, as supporting his own view of the matter, that Dr. Haug "calls absurd" the theories of those who hold that the lunar asterisms constituting the old Hindu zodiac were probably devised in some other country than India. For if he had dared to quote Haug's own *dictum*, his readers would have seen how weak a staff it was to lean upon. Haug is speaking of the observation of the solstices recorded in the Jyotisha, and remarks: "To believe that such an observation was imported from some foreign country, Babylon or China, would be absurd; for there is nothing in it to show that it cannot have been made in the northwestern part of India, or a closely adjacent country." That is to say, it is absurd to believe anything the contrary of which does not admit of being proved impossible! Moreover, it will be noticed how far Müller has stretched the bearing of the allegation of absurdity brought by his authority. After these two examples of his ill success in reporting the latter's opinions, we should almost be justified in adding to any further statement of his, "made, as usual, very incorrectly."

In fact, we would call attention to one more very incorrect statement made in the course of the same review. He says, respecting the date of the observation above referred to, that it "has been fixed by the Rev. R. Main at 1186 B. C." (altered in the reprint to "has been accurately fixed," etc.). But this gentleman did nothing whatever toward fixing the date in question except to take a calculation made by Archdeacon Pratt, of Calcutta, and very slightly change the value of one of the factors in it, namely, the precession of the equinoxes. Mr. Pratt had estimated the precession approximately, as is usual in calculations of this character, at one degree in seventy-two years; greater precision than this does not comport with the general conditions of the problem; and the other, by insisting upon its absolute mathematical value, committed a piece of mathematical pedantry, very much as one who should insist on a fraction of a mile in estimating the distance of the sun from us. The whole calculation, to be sure, is little better than worthless, and has been so proved; but if any one is to have credit for it, it is Archdeacon Pratt, and he alone.

Astronomy is not one of Professor Müller's strong points, and it would be easy to show that others of his reasonings in this essay bearing upon astronomical subjects are unsound and without value; but we have surely already said enough to prove our thesis, that the omission of the essay and its appended note from his next edition would be a

notable increase of the value of the work. We hope that in the other pair of volumes, promised as the completion of the series, he will be somewhat more tender of his fellows' reputation and of his own.

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2. — 1. *Women's Suffrage; the Reform against Nature.* By HORACE BUSHNELL. New York: Charles Scribner & Co. 1869.
2. *The Subjection of Women.* By JOHN STUART MILL. New York: D. Appleton & Co. 1869.

ENGLISH style is distinguished by the atmosphere of homely splendor, of familiar pomp, of surcharged association, in which its words move. The sentences unroll themselves deliberately, seeming to listen to their own progress, now packing volumes of meaning into a simple word, now yielding to passing suggestions and incorporating into their mass epithets and clauses which writers of other nations would neglect as collateral and exuberant fancies. The secret of this peculiarly English richness of movement has been kept by Dr. Bushnell, perhaps, more steadily than by any other of our contemporary writers. Mr. Mill's sentences, clean, weighted, and going straight to their mark, would, if translated literally, sound as natural and forcible to French, German, or Italian ears as they do to ours. But Dr. Bushnell's, in any tongue but our own, would have an outlandish air. To take an example at random: "Where we touch the limits of reason, they [women] touch the limits of excess; where we are impetuous in a cause, they are uncontrollable in it. We know how, as men, to be moderated in part, by self-moderation, even as ships by their helms in all great storms at sea; for the other part we had women kept in moderation by their element, even as ships in harbor lie swinging by their anchors; but now we get even less of help from these than they do from us." The reef on which the old English style often split came from an excess of this self-listening, and the result was affectation, or, to use the vulgar term, *mouthing*. And Dr. Bushnell with his rich fancy has not steered clear of the reef. A clerical training always tends to make a diffuse writer, and we think that "Women's Suffrage" would have been a more solid book if its author's remarkable powers of *ex*pression had been a little balanced by some cultivation of a correlative power of *re*pression. As it is, he is redundant and careless, not to say often vulgar; as in such phrases as, "the Duchess of Devonshire was a high-life conventional kind of woman."

Dr. Bushnell's thesis is, that although the present status of women is in many respects one of wrongful "abridgment," and although they ought to have facilities for education and occupation opened to them in many hitherto untried ways, society should nevertheless make a resolute stand against admitting them to share in any sort of "government." Preachers they may be, but not pastors or presbyters or bishops; attorneys, but neither advocates nor judges. "Administration" of any kind in which authority is implied lies without their province, — most of all, the holding of political office, and the exercise of the suffrage. This weighty conclusion is derived from a conception of the essential nature of woman and of government, expressed in an infinite variety of ways throughout the book. She is not "created" to mingle in any kind of strife, or "to batter the severities of fortune. . . . . All government belongs to men . . . . Where agreement is impossible, one of the two clearly must decide, and it must be the man. The woman's law . . . . requires it of her . . . . to submit herself to his fortunes. . . . . If he has no sway-force in him . . . . to hold the reins, he is no longer what Nature means when she makes a man." Women are "naturally subject," "subordinate," meant to yield to evil and violence, not to combat them with answering evil and violence. So far so good. If Dr. Bushnell is contented to urge this as an ideal, a matter of inexplicable sentiment, he remains in a strong position. The universal sense of mankind hitherto, and its almost universal sense now, will uphold him. But he is naturally tempted to illustrate the doctrine and enforce it by arguments derived from different orders of considerations, which to our mind are far from making it more imposing; but rather, being unsound themselves, tend to infect it with their own decay, and so undo the authority it possesses in its brute dogmatic form.

The first and chief of these arguments is, that the subordination of women, instead of implying their inferiority, "gives them, morally considered, the truest and sublimest conditions of ascendancy; . . . . woman has her government as truly as man," namely, "by grace." It is to his as the gospel is to the law, "and accomplishes just what the law, in that it was weak, could not accomplish. . . . . The honors of womanhood lie in gentleness and patience, or it may be the dreadful lot of violence and tyrant cruelty endured." Her supreme glory is to be a "subject nature, ... milder, truer, and closer to the type of God's own dear submissions in the cross of his Son," than our "coarse forbidding masculinities" will let us attain. This is nothing but the good old Catholic doctrine, invented when people were hopeless of an order to be realized in this world, that suffering is a higher vocation

than action. It has done much good in its day, — saved many a slave from envy and despair, and consoled sick men in all ages of the world. But there has probably not been an unjust usage in Christendom which has not at some time sought shelter under its wings. No well man or free man ever adopted it for his own use. Protestantism has practically almost abandoned it in its generality. Dr. Bushnell himself probably makes no wider application of it than to the present case. And we have little doubt, if the truth were known, that he would be found loath in his own person to exchange, even if he could, the power which his "coarse masculinities" endow him with, for the inestimable privileges of this sort of government by self-sacrifice. Modern civilization, rightly or wrongly, is bent on developing itself along the line of justice, and any defence of woman's position on ascetic principles will fall with little weight on the public ear. One smiles, and thinks of the author's own words, in another part of his book, as one listens to him "protesting his natural admirations, his zeal to serve and protect, the profuseness of his attentions, and the unstinted tribute of respect and deference he is always wont to render." This gallantry makes after all but a poor compensation to women for that restricted moral development which the limitation of the field of their responsibilities imposes on them.

Let us then cancel this particular reasoning in favor of women's abstinence from politics. Dr. Bushnell is immediately ready with another argument. It is that involved in the first of our quotations from him, to the effect that women now are something, but if allowed to meddle with government they will become less than nothing. The peculiar "grace" of their nature is so very tender and evanescent that it requires the most carefully adapted medium or "element" to save it from degenerating into mere repulsiveness. The divinity of which we have just been hearing so much is, we are surprised to learn, artificial; so that so simple an act as that of voting will sweep it away and leave not a rack behind. Feminine beauty we have long known to be but skin-deep; it was reserved for Dr. Bushnell to proclaim emphatically and categorically that the very essence of what we call the feminine character is of equally epidermic constitution. The portraits he untiringly draws, of women as they will appear after twenty-five years' enjoyment of the ballot, are almost too harrowing to quote. Lilies that fester smell far worse than weeds, and accordingly, whereas the "thunder" that clothes man's neck (our author never wearies of this "thunder" attribute of masculinity) looks rather well upon *him*, woman's "look will be sharp, her voice wiry and shrill, her action angular and abrupt; wiliness, self-asserting boldness, and eager-

ness for place and power" will ravage her once fair form. As for her moral state, "the strange facility of debasement and moral abandonment" which characterizes her will make her corruptions much worse than ours. Terrible hints are given, of the naughtinesses to which women will resort in order to procure votes, and the demoralization which will take place in country districts, where the voters, male and female, "will be piled in huge wagons to be carried to the polls, and will sometimes on their return encounter a storm that drives them into wayside taverns and other like places for the night; where" — but enough; the curious reader may find the rest of the passage on page 149. But the worst of the change in her is, that it is all to no purpose. The position for which she has abandoned her proper point of sway is one in which she is sure miserably to miscarry. Throwing away all she has, to clutch at a shadow, she ends with nothing; and her appearance, "sharp-featured, lank, and dry," will but reflect "the disappointment of an over-instigated nature," conscious of its own ridiculousness. Unhappy Dr. Bushnell! thus to supersaturate with the bitterness of this affront all the sweetness of compliment with which he previously smothered the sex! At their hands, not ours, must he receive his doom. We cannot help noticing, however, as we pass, how common this two-stool line of argument is in the school to which Dr. Bushnell belongs, — first, a vociferous proclamation of the utter and radical peculiarity of the womanly nature; then a nervous terror of its being altered from its foundations by a few outward changes. Mr. Mill's belief in the power of education is timid in comparison with this.

A chapter entitled "The Report of History" undertakes to show that wherever women have meddled with political affairs the result has been disastrous. Some of the examples strike us as unfortunately chosen. Delilah, Herodias, and the mistresses of Louis the Fifteenth would to our minds serve better as arguments in favor of educating women politically, and giving them the feeling of responsibility. The strongest of all "women's-rights" arguments is, that women are frivolous because they are irresponsible.

We have not space to follow the reverend author into further detail. We will just mention, however, the remedy he proposes, for much of the present dissatisfaction. It is, that "the almost colic stringency" of women's modesty may be "relaxed." Marriage is her true sphere; and, as three quarters of the men who are bachelors are so from timidity, the women should be allowed without impropriety to encourage them by making matrimonial advances themselves, when feeling prompts it.

On the whole, it does not seem to us that the author has very vividly

realized the practical importance of the matter he has undertaken to discuss, or that his essay is a very serious contribution to the literature of the subject. The word "frivolity" little consorts with the reverend character; and yet it seems as if manly earnestness ought to dictate some less hollow utterances than these, ought at any rate to lead a writer to feel the facts more truly, and discern where the true *puncta dolorosa* of the disorder lie. We must close upon the note with which we began, — style. The little book leaves on one a strong impression that rhetoric — the mere delight of listening to one's self making sweet music — was an important motive in its production. Even in that respect it cannot be considered wholly a success, and it certainly will add nothing in any circle to Dr. Bushnell's reputation either as a thinker or as an advocate.

If Dr. Bushnell's writing advances, tacking and fluttering with the *allure* of an iridescent butterfly, Mr. Mill launches his smashing projectile straight through every intervening obstacle to its goal. Few books were ever written with so few waste sentences. There is, indeed, an air of hot vehemence about it, to which one is not quite accustomed in its author, and which leaves an impression as of a sore subject, long pent up and brooded over in his mind, and published under a sudden passionate determination that, come what may, he will hold his peace no longer. This amount of feeling has led him, we think, in one or two places to press his arguments beyond the point at which, in a subject that he looked at more coolly, he would probably have stopped: as when, for example, he maintains that we are at present all but absolutely ignorant of the true mental characteristics of woman. It even makes him guilty of something like special pleading, as where he attempts to show that we have no good ground for thinking women to be naturally less fitted for original production in music than men. In fact there runs through the whole book a sort of quibble on the expression "*nature* of women." The main-stay of his thesis is, that there is nothing fixed in character, but that it may, through the education of a sufficient number of generations, be produced of any quality to meet the demand; yet nevertheless he keeps speaking of woman's present condition as a distorted and "unnatural" one. "Undesirable" is the only word he can consistently use. His belief in the omnipotence of education leaves him logically free to admit any amount of *present* native diversity in the average mental aptitudes of the sexes, since that would not on his hypothesis be essential or final. As it is, his somewhat nervous anxiety to efface even the present distinction leads him into extremes where numbers — even of those who fully sympathize with his practical aims — will not care to follow, and deprives the book, in adverse eyes,

of that wonderful fairness which has always been the secret of Mr. Mill's power to convince.

The "woman question" has hitherto been in the main a practical one. The etiolated and stunted condition of single women on the one hand, and the interests of order in the family on the other, have been the chief points of attack by the reformers, and retort by the conservatives. On purely sentimental grounds no well-organized warfare has as yet been waged, since both parties have not seemed unwilling on the whole to recognize the same standard. We cannot help thinking, accordingly, that the most noteworthy feature of this in all respects noteworthy book is its thorough hostility to the accepted sentimental ideal of the personal intercourse of man and wife.

If we have not misconceived the matter, Mr. Mill's ideal is a new one, to this country as well as to Europe. Much of what he attacks exists here but in feeble form. The legal abuses are in large measure obsolete; the element of brutality which he makes so prominent in the masculine feeling of superiority is foreign; American husbands are as a rule less sensitive about their wives occupying a position of independent publicity than those of whom Mr. Mill writes; and Mrs. Grundy is not the tyrannical reality to American which she is to English matrons. But bating all this, the sentimental kernel of the essay is revolutionary even here. It is true that the author does not force his sentiment into the foreground, and *deduce* from it as frankly as its importance would justify. But it lurks as a hidden premise in all his reasoning, and, incidentally, is abundantly expressed. It is what furnishes that intense contempt for our actual arrangements which gives such a headlong character to his work; and as we just now likened the latter to a projectile, we may liken this feeling to the powder whose explosion supplies the velocity with which it speeds.

A sentimental ideal of this sort is of course too evanescent and subtle to be stated in scientific black-and-white; but we will bring together a number of disconnected passages from the book, and the reader will easily feel out from them what we mean: "If the family in its best forms is, as it is often said to be, a school of sympathy, tenderness, and loving forgetfulness of self, it is still oftener, as respects its chief, a school of wilfulness, overbearingness, unbounded self-indulgence, and a double-dyed and idealized selfishness, of which sacrifice itself is only a particular form, — care for the wife and children being only care for them as parts of the man's own interests and belongings, and their individual happiness being immolated in every shape to his smallest preferences. There is nothing which men so easily learn as this self-worship. All privileged persons and all privileged classes have had it. The more

we descend in the scale of humanity, the intenser it is. . . . . We have had the morality of submission and the morality of chivalry and generosity; the time has come for the morality of justice. . . . . The true virtue of human beings is fitness to live together as equals, ... preferring whenever possible the society of those with whom leading and following can be alternate and reciprocal. . . . . Any sentiment of freedom which can exist in a man, whose nearest and dearest intimacies are with those of whom he is absolute master, is not the genuine or Christian love of freedom, but what the love of freedom generally was in the ancients and in the Middle Ages, — an intense feeling of the dignity and importance of his own personality; making him disdain a yoke for himself of which he has no abhorrence whatever in the abstract, but which he is abundantly ready to impose on others for his own interest or glorification. . . . . All the selfish propensities, the self-worship, the unjust self-preference, which exist among mankind have their source and root in, and derive their principal nourishment from, the present constitution of the relation between men and women. . . . . The principle of the modern movement in morals and politics is, that conduct, and conduct alone, entitles to respect; that not what men are, but what they do, constitutes their claim to deference. . . . . Intimate society between people radically dissimilar to one another is an idle dream. Unlikeness may attract, but it is likeness which retains; and in proportion to the likeness is the suitability of the individuals to give each other a happy life. . . . . It is not with impunity that the superior in intellect shuts himself up with an inferior, and elects it for his sole completely intimate associate. Any society which is not improving is deteriorating, and the more so the closer and more familiar it is. . . . . What marriage may be in the case of two persons of cultivated faculties, identical in opinions and purposes, between whom there exists that best kind of equality, — similarity of powers and capacities, with reciprocal superiority in them, so that each can enjoy the luxury of looking up to the other, and can have alternately the pleasure of leading and being led in the path of development, — I will not attempt to describe. To those who can conceive it there is no need; to those who cannot it will appear the dream of an enthusiast. But I maintain, with the profoundest conviction, that this, and this only, is the ideal of marriage."

Now all this is clearly inimical to the conception of a wife as a possession, as a finality. Independence is Mr. Mill's personal ideal, and his notion of love confounds itself with what is generally distinguished as friendship; — each party being able to subsist alone, and seeking a mate, not to supply an essential need, but to be enjoyed as a mere ally, or great moral luxury. We think that the ideal of the representative

American is opposed to this. However he might shrink from expressing it in naked words, the wife his heart more or less subtly craves is at bottom a dependent being. In the outer world he can only hold good his position by dint of reconquering it afresh every day: life is a struggle where success is only relative, and all sanctity is torn off of him; where failure and humiliation, the exposure of weaknesses, and the unmasking of pretence, are assured incidents: and he accordingly longs for one tranquil spot where he shall be valid absolutely and once for all; where, having been accepted, he is secure from further criticism, and where his good aspirations may be respected no less than if they were accomplished realities. In a word, the elements of security and repose are essential to his ideal; and the question is, Are they easily attainable without some feeling of dependence on the woman's side, — without her relying on him to be her mediator with the external world, — without his activity overlapping hers and surrounding it on almost every side, so that he makes as it were the atmosphere in which she lives?

Many men will answer No, peremptorily; for instance, Dr. Bushnell, who says: "When a woman has set herself up for a practical dittoship (*sic*) with men, refusing to accept the name of her husband, or have any but a partnership relation with him, she ceases so far to be woman at all. She has no longer the trusting nature; she despises it. She neither idolizes nor idealizes her husband. She has no homages looking up, any more than he in his ranges of force has courtesies to pay her, looking down. He is gruff and she is pungent, and the main sensibility of life is the friction of it." Another class of minds, less dogmatic than this author as to what is *a priori* "natural," will nevertheless make a half-sentimental, half-practical objection to Mr. Mill, somewhat as follows: "Love is now as common as friendship is rare. Mere mutual respect, and sympathy in some end objective to both parties, form but a weak tie in comparison with that flattering interplay of instincts, — egotism, since you prefer to call it so, on the one hand, and self-sacrifice on the other. Do you not, then, in attempting to eradicate these latter things, run the risk of sweeping away the main condition that now makes matrimonial affection so cheaply realizable?" Other sceptics still will add: "After all, does not a man's sympathy with his wife differ from his sympathy with his friend in *sphere* rather than quality, as implying a hierarchical arrangement? His sympathy with his wife is in interests purely personal, social ends including the founding of the family, and the minor practical matters of life; but *within that sphere* may there not be the most thorough equality?" It is true Mr. Mill says: "When the two persons both care for great objects,

and are a help and encouragement to each other in whatever regards these, the minor matters on which their tastes may differ are not all-important to them; and there is a foundation for solid friendship, of an enduring character, more likely than anything else to make it through the whole of life a greater pleasure to each, to give pleasure to the other, than to receive it." (Page 174.) According to this, the most important requisite in an astronomer's wife is, that she should have a passion for astronomy. But it may be conscientiously doubted whether in the majority of cases, even where equality was fully believed in by both parties, agreement in the "minor matters" would not afford the surest basis for a lifelong harmony; and whether consequently any difference of taste or instinct in the sexes which tends to facilitate such agreement ought not still to be fostered by education.

There is one kind of æsthetico-sentimental objection frequently urged against any considerable change in woman's position, that we think has little weight. It is to the effect that what gallantry and chivalry are left among us will disappear. Thus Dr. Bushnell: "We observe a common-looking man, for example, standing, in a railroad car, that a common-looking woman may sit, and we say inwardly at least, if not audibly, there is yet after all some hope of the world. . . . . These beautiful deferences and homages paid to women are the very best civilizers we have, and we can better afford to spare almost anything else." The assumption is that our yielding to women in small matters demands as *quid pro quo* on their part that they refrain from crossing our path in larger affairs; and that if they become our rivals in these latter, we shall no longer scruple to push them to the wall wherever we find them. This leaves altogether out of sight the mere animal potency of sex. An individual man, however his interests may clash with those of an individual woman, will always shrink from appearing personally like a brute in her presence.

We have laid such stress on this sentimental side of Mr. Mill's book, because here, more than anywhere else, a careless reader will be apt to miss its extremely revolutionary purport, and because, as we have already said, we regard it as the soul of the whole. Mr. Mill's sentiment about the marriage relation has for a necessary corollary divorce at will, with all the tremendous changes such divorce must entail upon the relation of children to society. Yet with that strange "air of suppression" which critics have complained of in him, he has passed these topics over in utter silence. It may be, he thinks his remedies will go farther when administered in divided doses, and that for the rest — utilitarian that he is — he is biding his time. But there are hosts of readers who feel that in this matter senti-

mental and practical considerations must go hand in hand, and whom timidity in the latter respect deters from trusting fully their instincts in the former. It were therefore much to be desired that Mr. Mill should publish his whole mind on the subject of divorce and of the family, without delay or reserve.

We shall not touch upon any of the other points the work presents, nor even say what they are; for it ought to be read by every one who cares in the least degree for social questions, — and who does not? — in its original form. No one can read it without feeling his thought stimulated and enlarged; numbers of those who are at present sceptical or indifferent will be converted by it; and many will be toughened in their resisting conservatism by the suggestive glimpse it affords of the ultimate tendencies of the democratic flood which is sweeping us along. It may be that Mr. Mill's fervid passion for absolute equality, "justice," and personal independence, as the *summum bonum* for every one, is a personal peculiarity. It may be that he is only more far-seeing than the majority, and that the wiping out of everything *special* in any man's relations to other men — of every moral tie that can possibly be conceived of as varying in varied circumstances, and therefore as artificial — is but the inexorable outcome of the path of progress on which we have entered. If this is so, there can be little doubt that this small volume will be what the Germans call "epoch-making," and that it will hereafter be quoted as a landmark signalizing one distinct step in the progress of the total evolution.

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3. — 1. *Les Quatrains de Khèyam, traduits du Persan.* Par J. B. Nicolas, ex-Premier Drogman de l'Ambassade Française en Perse, Consul de France à Resht. Paris: Imprimé par Ordre de l'Empereur à l'Imprimerie Impériale. 1867. 8vo. pp. xv., 229.
2. *Rubáiyát of Omar Khayyám, the Astronomer-Poet of Persia.* Rendered into English Verse. London: Bernard Quaritch. 2d ed. 1868. Sq. 8vo. pp. xviii., 30.

The prevailing traits of the genius of Omar Khayyám are so coincident with certain characteristics of the spiritual temper of our own generation, that it is hardly surprising that his poetry, of which hitherto the Western world knew nothing, is beginning to excite the interest it deserves, and has lately been made accessible to us in translation. The fame of Omar, certainly one of the most remarkable poets of Persia, has been narrowly confined within the limits of his own language, and even his name has scarcely been heard outside his own land.

This is hardly to be wondered at; for there is much in the quality of his verse to render it unacceptable to the generality of orthodox readers of poetry, and to those who read only *with* and not *through* their eyes. The transcendental character of much of his poetry takes it out of the range of common appreciation, and that it may be understood at all it requires to be read with something of the same spirit with which it was written.

Omar Khayyám was born near Naisháṕur in Khorassan in the second quarter of our eleventh century, and died, it is said, in the year 1123; thus preceding Hafiz by more than three centuries, and Saadi by about a century. It is a striking illustration of the early bloom of Persian culture, that Omar precedes Dante by two hundred years.*

The slender story of his life is curiously connected with two very prominent figures in their time and country, one of whom — Nizám-ul-Mulk, Vizier to Alp Arslán, the second Sultan of the Seljukian dynasty — tells the story of all three in a testament which he left as a memorial for future statesmen. He relates as follows: —

"One of the greatest of the wise men of Khorassan was the Tmám Mowaffak of Naisháṕur, a man highly honored and reverenced, — may God rejoice his soul! His illustrious years exceeded eighty-five, and it was the universal belief that every boy who read the Koran or studied the traditions in his presence would assuredly attain to honor and happiness. For this cause did my father send me from Tús to Naisháṕur with Abd-us-samad, the doctor of law, that I might employ myself in study and learning under the guidance of that illustrious teacher. Towards me he ever turned an eye of favor and kindness, and as his pupil I felt for him extreme affection and devotion, so that I passed four years in his service. When I first came there, I found two other pupils of mine own age newly arrived, — Hakim Omar Khayyám and the ill-fated Ben Sabbáh. Both were endowed with sharpness of wit and the highest natural powers; and we three formed a close friendship together. When the Tmám rose from his lectures, they used to join me, and we repeated to each other the lessons we had heard. Now Omar was a native of Naisháṕur, while Hasan Ben Sabbáh's father was one Ali, a man of austere life and practice, but heretical in his creed and doctrine. One day Hasan said to me and to Khayyám: 'It is a universal belief that the pupils of the Tmám Mowaffak will attain to fortune.

* Omar has always held a high place in Persian esteem, both as man of science and as poet. He was famous as an astronomer, at a time when all astronomical science belonged to the Persians and Arabians. Information concerning his astronomical and mathematical works is to be found in the introduction to the *Algèbre d'Omar Alkhayyâmê*, translated, and illustrated with extracts from unpublished manuscripts, by M. Woepcke (Paris, 1861, 8vo).

Now, if we *all* do not attain thereto, without doubt one of us will; what then shall be our mutual pledge and bond?' We answered, 'Be it what you please.' 'Well,' he said, 'let us make a vow that, to whomsoever this fortune falls, he shall share it equally with the rest, and reserve no pre-eminence for himself.' 'Be it so,' we both replied, and on those terms we mutually pledged our words. Years rolled on, and I went from Khorassan to Transosicana and wandered from Ghazni to Cabul; and when I returned I was invested with office and rose to be administrator of affairs during the Sultanate of Sultan Alp Arslán." *

He goes on to state, that years passed by, and both his old school friends, having found him out, came to claim a share in his good fortune, according to the school-boy vow. The Vizier was generous and kept his word. Hasan demanded a place in the government, which the Sultan granted at the Vizier's request; but, discontented with a gradual rise, he plunged into the maze of intrigue of an Oriental court, and, failing in a base attempt to supplant his benefactor, he was disgraced and fell. After many mishaps and wanderings, Hasan became the head of the Persian sect of the Ismaïlians, a party of fanatics who had long murmured in obscurity, but rose to an evil eminence under the guidance of his strong and evil will. In A. D. 1090 he seized the castle of Alamút, in the province of Búdbar, which lies in the mountainous tract south of the Caspian Sea; and it was from this mountain home he obtained that evil celebrity among the crusaders as the Old Man of the Mountains, and spread terror through the Mohammedan world; and it is yet disputed whether the word *assassin*, which his followers left to the languages of Modern Europe as their dark memorial, is derived from the *hashish* or opiate of hemp-leaves (the Indian *bhang*), with which they maddened themselves to the sullen pitch of Oriental desperation, or from the name of the founder of the dynasty, whom we have seen in his quiet collegiate days at Naisháṕur. One of the countless victims of the assassin's dagger was Nizam-ul-Mulk himself, the old school-boy friend.

Omar Khayyám also came to the Vizier to claim the share, but not to ask for title or office. "The greatest boon you can confer on me," he said, "is to let me live in a corner under the shadow of your fortune, to spread wide the advantages of science, and pray for your long life and prosperity." The Vizier tells us that, when he found Omar was really sincere in his refusal, he pressed him no further, but granted him a yearly pension of 1200 mithkals of gold from the treasury of Naisháṕur.

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* The narrative may be found in the preface to each of the works whose titles stand at the head of this paper. The English author cites from the Calcutta Review, No. 59, where the account is in its turn taken from Mirkhond's History of the Assassins.

At Naishápúr thus lived and died Omar Khayyám, "busied," adds the Vizier, "in winning knowledge of every kind, and especially in astronomy, wherein he attained a very high pre-eminence. Under the Sultanate of Malik Shah, he came to Merv, and obtained great praise for his proficiency in science, and the Sultan showered favors upon him."

We have only one more anecdote to give of his life, and that relates to its close; it is told in the anonymous preface which is sometimes prefixed to his poems.*

"It is written in the chronicles of the ancients that this King of the Wise, Omar Khayyám, died at Naishápúr in the year of the Hegira 517 (A. D. 1123). In science he was unrivalled, — the very paragon of his age. Khwájah Nizami of Samarcand, who was one of his pupils, relates the following story: 'I often used to hold conversations with my teacher, Omar Khayyám, in a garden; and one day he said to me, "My tomb shall be in a spot where the north wind may scatter roses over it." I wondered at the words he spake, but I knew that his were no idle words. Years after, when I chanced to revisit Naishápúr, I went to his final resting-place, and lo! it was just outside a garden, and trees laden with fruit stretched their boughs over the garden wall, and dropped their flowers upon his tomb, so as the stone was hidden under them!'"

Little more is known of the life of the poet, and there is little in his writings to illustrate its external conditions and course.

In obedience to the custom that prevails in Persia, that every poet should take a distinguishing name in addition to his own, Omar chose that of Khayyám, or Tent-maker, as indicating, it is said, the occupation which he himself carried on and which had been that of his father. The Persians declare that it was the modesty of the poet that prevented him from assuming a more brilliant name, such as that of *Firdusi*, "the Celestial," or *Hafiz*, "the Preserver."

His poetry is wholly composed of independent stanzas, called *Rubáiyát*, "consisting each of four lines of equal, though varied, prosody; sometimes all rhyming, but oftener the third line a blank. As usual with such Oriental verse, the Rubáiyát follow one another according to alphabetic rhyme, — a strange succession of grave and gay." And not merely a strange succession of grave and gay, but of such dark interior meaning that the two translators, M. Nicolas, and the anonymous English versifier, though apparently not at odds as to the literal meaning, are completely at variance as to the true interpretation and significance of Omar's verse. They agree, indeed (for this at least is plain), that

* The Persian text has been printed in the appendix to Hyde's *Veterum Persarum Religio*, p. 499; and D'Herbelot refers to it under "Khiam."

Omar was a sceptic, a free-thinker, no true believer, but a very thorn in the side of the orthodox disciples of the prophet. But while M. Nicolas regards him as essentially a mystic, concealing secret meanings in his verse, — a *Súfi*, — in a word, devoted to the contemplation of Divinity, and to the attainment of perfection, shadowing the Deity in his poetry under figures and tropes of Wine, Wine-bearer, and the like, the English translator, on the other hand, believes him to have been a materialistic Epicurean, audacious in thought and expression, who, "having failed of finding any Providence but Destiny, and any World but this, set about making the most of it; preferring rather to soothe the soul through the senses into acquiescence with things as he saw them, than to perplex it with vain disquietude after what they *might be*." "Omar flung his own genius and learning with a bitter or humorous jest into the general ruin which their insufficient glimpses only served to reveal; and, pretending sensual pleasure as the serious purpose of life, only *diverted* himself with speculative problems of Deity, Destiny, Matter and Spirit, Good and Evil, and other such questions easier to start than to run down, and the pursuit of which becomes a very weary sport at last. . . . . The old Tent-maker, after vainly endeavoring to unshackle his steps from Destiny, and to catch some authentic glimpse of To-morrow, fell back upon To-day (which has outlasted so many To-morrows!) as the only ground he got to stand upon, however momentarily slipping from under his feet."

The study of Omar's verse helps but little to reconcile this wide difference of judgment. Many of his quatrains, as the English translator admits, seem unaccountable unless mystically interpreted; but many more as unaccountable unless literally. May it not be that there are two sides to Omar's shield, — one of mystic gold, the other of plain silver? It belongs to the true poet to represent more completely than other men the double nature of man, — the spiritual and the sensual alike; in him the vision and the faculty divine are indissolubly bound to the delight of the eye in the beauty of the actual world, and to the joy of the heart in the present life. The higher the spiritual imagination reaches, the broader must be the foundation on which it rests, of love and knowledge of material existence. Omar may have sung, in a literal sense, the praises of the wine which gladdens the hearts of men, without any feeling of incongruity when he sings that wine which is the spiritual reviver and comforter of the soul. The common literal object easily becomes a type of divine excellence, and other Persian poets have used wine and beauty as images to illustrate the divinity they were celebrating. The English translator, indeed, who denies to Omar's verse the spiritual significance which

many of his Persian readers attribute to it, admits that the chief Persian poets, including Háfiz, borrowed largely of Omar's material, "but turning it to a mystical use more convenient to themselves and the people they addressed, — a people quite as quick of doubt as of belief; as keen of bodily sense as of intellectual, and delighting in a cloudy compound of both, in which they could float luxuriously between heaven and earth, and this world and the next, on the wings of a poetical expression, that might serve indifferently for either." It is true that, however much of spiritual significance may be allowed to Omar's verse, many of his quatrains refuse to be thus interpreted, and compel us to accept them as simple expressions of earthly passion and of sensual delights. But whatever allowance be required for the sensual side of Omar's character, his quatrains give proof of the delicacy no less than of the strength of his poetic nature, of the subtility no less than of the elevation of his thought. The deepest questions that perplex mankind occupy him. Seeking with a shrewd, inquisitive, and independent intelligence, he fails to find a trustworthy answer to the problems of existence and eternity; and his penetrating imagination serves him no better than his understanding in the attempt to reach assurance concerning the nature of God and man. But he does not rest in simply negative conclusions, in mere denial of the unfounded assertions, and reaction from the vain superstitions, of the popular religious creed. He doubts, indeed, at times, as he watches the perverse course of human affairs, whether there be a God; he presents clearly the dilemmas involved in the conception of a divine power creating and sustaining the universe; for him there is neither heaven nor hell outside of his own soul. If there be a God, he has made man weak, liable to error, and full of passions, and has left him in doubt as to his destiny; but if there be a God, he must know the nature of the beings he has made, and is surely not worse than they, and will not punish them for being such as he has made them. If we interpret some of Omar's quatrains mystically, we find him sometimes seeking satisfaction in pantheistic abstractions, in efforts toward communion with, and absorption in, the Divine, and sometimes betaking himself to atheistic speculations, and admitting no other guiding principle in the universe than a blind, impartial fate. But, perplexed or baffled as he may be, he maintains a manly independence, and, finding nothing outside or beyond this world to rest upon, fixes himself solidly here, and resolves, while all things are fleeting and changing around him to enjoy at least the present hour, and to make the best of the life which is his to-day, but may not be his to-morrow. However shifting and uncertain are his thoughts respecting the invisible and the un-

known, his practical philosophy does not vary, and, like the Hebrew preacher, he constantly repeats: "There is nothing better for a man than that he should eat and drink, and that he should make his soul enjoy good in his labor. This also I saw that it was from the hand of God."

Strokes of a vigorous imagination, strongly grasping the reality, constantly occur in his verse. His boldness of expression often runs into audacity. Things held sacred he treats with a free hand, and what he ventures to think he ventures also to speak. The bitter contrast between the wretchedness of men in this life and their undefined expectations of a better lot in another life moves him at times to contemptuous irony of human hopes and efforts, at times to indignant scorn of the supposed divine order of the universe. From the illusions of earth, — the palace of misery, — he turns to the real, if transient, gladness of wine, and celebrates the joys of self-forgetfulness in the embrace of the twisted tendrils of the grape. He professes no wisdom but that of honest integrity of thought, which authorizes him to speak plain truth whether it be acceptable or not. He has no disposition to make terms with the true believers. He is unsparing in his rebukes of pretenders to religion, and in his satire of its ministers. But his fancy chiefly occupies itself with the transitoriness and uncertainty of human affairs, with the ignorance of man concerning his own destiny, with the quick passage of life, and with the means of enjoyment which the hour affords.

In a literal translation much of the charm of the original must be lost, and much of its spirit evaporates. But even in the dry version of M. Nicolas the transcendental character of Omar's poetry is apparent, and its essential qualities do not altogether disappear.* The English anonymous translator, of the character of whose version I have yet to speak, has confined his work within such narrow limits that, before proceeding to it, it may be well to give some passages from the French rendering, which illustrate the nature of the genius and of the speculations of the poet: —

"In this world, which for an instant serves us as an asylum, we have experienced naught but trouble and misfortune. Alas! no problem of creation has been solved for us; and yet we quit this earth with hearts full of regret."

"Since no one can assure us of to-morrow, hasten to rejoice thy sad heart. Drink, O beloved! drink from the ruby cup; for the moon shall long turn around the earth without again finding us."

* M. Nicolas gives the original text as well as the translation of Omar's work, — four hundred and sixty-four quatrains in all. His notes are copious and useful.

"When I take in my hand a cup of wine, and in the joy of my heart am drunken, then in the fire that consumes me — behold! — a hundred miracles become real, and words clear as limpid water seem to explain the mystery of the universe."

"Unbelief is divided from faith but by a breath; doubt from certainty but by a breath; life from death but by a breath. Pass gayly over the dividing line."

"My life runneth out in a brief space: it passeth as the wind of the desert. Therefore, while a breath remaineth to me, there are two days concerning which I will not disquiet myself, — the day that hath not come, and the day that hath gone."

"Who can believe that he who fashioned the cup meaneth to break it to pieces? All these fair heads, these beautiful arms, these delicate hands, — by what love are they made? by what hate are they destroyed?"

"O Khayyám! why grievest thou because of thy sin? What solace findest thou in thus tormenting thyself? He who hath not sinned shall not taste the sweet of forgiveness. It is for sin that forgiveness exists. How then canst thou fear?"

"That day when the heavens shall melt, and the stars be darkened, I will stop Thee on Thy way, and, seizing Thee by the hem of Thy garment, will require of Thee to tell me, Why, having given me life, Thou hast taken it from me."

"I asked of the world, — the bride of man, — what was her dowry; and she answered me, My dowry is the joy of thy heart."

"The heart on whom the light of love hath shone, whose name is written in the book of love, that heart, whether it frequenteth mosque or synagogue, is free from fear of hell, or hope of heaven."

"If I drink wine it is not for mere delight of the taste, nor that I should become disorderly and renounce religion and morality; no, it is that I may for one moment exist outside of myself."

"I know not whether He who hath created me belongeth to paradise or to hell; but this I know, that a cup of wine, my beautiful love, and a lute on the edge of a meadow, are three things which I enjoy to-day, while thou livest on the promise of a paradise to come."

"At this moment, when life is not yet gone out of my heart, it seemeth to me there are few problems that I have not solved. But when I appeal to my understanding, and turn inward on myself, I perceive that my life hath flowed away, and as yet I have defined nothing."

"O Thou! in whose eyes sin is of no account, order the wise to proclaim this truth; for there is no folly equal to that of making the divine foreknowledge the accomplice of iniquity."

"My being was given me without my consent, so that my own existence is a wonder to me. Yet I leave the world with regret, having comprehended neither the object of my coming, of my stay, nor of my departure."

"They who by their learning are the cream of the world, who by their understanding traverse the heights of heaven, even they, in their search after knowledge of the divine, have their heads turned, whirling in vertigo, like the firmament itself."

"Give thyself to joy, for grief will be infinite. The stars shall again meet together at the same point of the firmament; but out of thy body shall bricks be made for a palace-wall."

"The day when I shall be a stranger to myself, and when my name shall be as a tale that is told, then make of my clay a wine-jar for use in the tavern!"

"The secrets of existence no man hath penetrated; a step beyond himself no man hath taken. From the scholar to the master I behold only incompetence, — the incompetence of all of woman born."

"Who hath found access behind the curtain of destiny? Who hath knowledge of the secrets of Providence? Night and day, for threescore years, have I meditated, yet have I learned nothing; the riddle remaineth unsolved.'

"Drink wine! for wine putteth an end to the disquietudes of the heart, and delivereth from meditations on the two-and-seventy sects. Abstain not from this alchemy, for if thou drinkest but one jarful, a thousand infirmities shall fall away from thee."

"The devotee comprehendeth not as we the divine mercy. A stranger knoweth thee not so well as a friend. If Thou sayest, 'Behold, if thou committest sin I will cast thee into hell,' — go, say it unto one who knoweth Thee not."

"The rolling heavens do naught but multiply our woes. What they set upon earth they quickly snatch away. Ah! if they who have not yet come knew what suffering the world inflicts, they would take good heed how they came."

"O friend! why busy thyself concerning *existence?* Why trouble thy heart and soul with idle thoughts? Live happy; pass joyful days; for in truth thy advice was not asked concerning creation."

"O Thou, in quest of whom the whole world hath gone astray and is in distress, neither prayers nor riches avail to find thee out: Thou takest part in every conversation, but all are deaf; Thou art before the eyes of all, but all are blind."

"Though I have not pierced the pearl of obedience that is due to Thee, though never with my heart have I swept up the dust of Thy steps, yet I despair not of reaching the sill of Thy throne of mercy, for never have I importuned Thee with my complaints."

"We are puppets with which the heavens amuse themselves; we are pieces on the chess-board of being, whence we are laid aside, one by one, into the coffin of nothingness."

"I saw on the walls of the city of Thous a bird, with the skull of Kay-Kavous before him. The bird said to the skull, Where now is the noise of thy glory? where now is the sound of thy clarion?"

"If the rose be not ours, yet have we not its thorns? If the light reach us not, have we not the fire? If Heaven refuse me peace, am I not ready for war?"

"All things that the world contains are images and illusions, and he hath little wisdom who includeth not himself among these images. Be quiet, then, O friend! drink, and deliver thyself from vain fancies and thoughts that cannot reach their goal."

"If I am drunken with old wine, so be it. If I am infidel, or idolater, so be it. Let each man think of me as he will, what matters it? I belong to myself, and I am that which I am."

"The circle of the universe is a ring of which you and I are the graven gem."

"Lift Thou from my heart the weight of the vicissitudes of life. Hide from men's eyes my faults. Give me happiness to-day, and to-morrow deal with me according to Thy mercy."

"I beheld a man withdrawn into a desert place. He was neither heretic nor Mussulman; he possessed neither riches, nor religion, nor God, nor truth, nor law, nor certitude. Who is there in this world or in the other who hath such courage?"

"The wheel of Heaven runs to thy death and mine, O beloved! it conspires against thy soul and mine. Come, come, sit beside me on the grass, for little time remaineth before the grass shall spring from my dust and thine."

"Tell me what man is there who hath not fallen into sin! Can man exist and not sin? If because I do ill Thou punishest me with ill, say, what difference is there between Thee and me?"

"Thou hast set a hundred snares round about us. Thou sayest, 'If ye fall into them ye shall surely die!' It is Thou that spreadest the net, and if a man be taken in it Thou condemnest him, Thou deliverest him to death, Thou callest him rebel!"

"A sheikh said to a harlot: 'Thou art drunken; thou art taken in the net of whoso will.' And she answered: 'O Sheikh! I am that which thou sayest; but thou, art thou what thou professest to be?'"

"At times Thou art hidden, disclosing Thyself unto no one; then again Thou revealest Thyself in all the images of the universe. Verily, it is for Thyself and for Thine own pleasure that Thou workest these marvels, for lo! Thou art both the show and the spectator."

Such passages as these, suffering from the accumulated injuries of a double translation, and reproducing neither the poetic form nor the style of the original verse, while they but imperfectly render its substance, can hardly fail in spite of all these drawbacks to leave a strong impression on the mind of the reader — especially if he be a little versed in the usual manner of the Persian poets — of the originality of Omar's genius, and of the vigor of his character as shown in the independence of his attitude toward the popular belief and predominant opinions of his time. The individual quality of the poet's imagination, the clear, defined precision of his expression, the spiritual insight of his speculation, and the realistic truth of his rendering of feeling, unite to give him a high place among the poets of his country; while his direct dealing with subjects of universal import, and his grasp of thoughts and moods common to the latest generation, set him among the few poets who have more than a mere historic or literary interest for men of different race, of different language, and of another age than his. Leaving altogether out of view the striking contrast which his poetry offers to the contemporary poetic productions of the Western world, and the picture it affords of the material civilization no less than of the spiritual culture of Persia at the period when it was composed, it possesses an intrinsic claim to record, as the imaginative utterance of one who in his time was busied with the questions which from the days of Adam to the latest day have occupied the best and wisest of the sons of men, and to which each has striven — and shall we say each as vainly as Omar himself? — to discover the answer which shall satisfy the doubting, sceptical, sad heart of man. That such a view, at least, of the significance and worth of the poetry of Omar has been held by his English translator, is plain from the manner of the work which he has given us. He is to be called "translator" only in default of a better word, one which should express the poetic transfusion of a poetic spirit from one language to another, and the re-presentation of the ideas and images of the original in a form not altogether diverse from their own, but perfectly adapted to the new conditions of time, place, custom, and habit of mind in which they reappear. In the whole range of our literature there is hardly to be found a more admirable example of the most skilful poetic rendering of remote foreign poetry than this work of an anonymous author affords. It has all the merit of a remarkable original production, and its excellence is the highest testimony that could be given, to the essential impressiveness and worth of the Persian poet. It is the work of a poet inspired by the work of a poet; not a copy, but a reproduction, not a translation, but the redelivery of a poetic inspiration.

Much in the English work has been simply suggested by the original. Hints supplied by Omar are enlarged; thoughts touched upon by him are completely grasped; images faintly shadowed by him, fully developed. The sequence of the Persian quatrains, depending on the rhyme and not upon the contents of the verse, admits of no progressive development of feeling, and no logical continuity of thought. The poet is compelled by his form into sententiousness, into gnomic sayings, into discontinuous flashes of emotion, and finds himself obliged to recur often to the same idea, in order to present it under a new image or in a different aspect. The English Omar has not troubled himself to follow this peculiarity of his model. He has strung his quatrains together in an order which, if it fail to unite them all in a continuous and regularly developed whole, into a poem formed of the union of the separate stanzas, does at least so bind together many of them that the various portions seem like fragments of an Oriental eclogue. Moreover, a minor key of sadness, of refined melancholy, seems to recur in the English composition more frequently than in the Persian. The sentiment of the original Omar is often re-enforced by the English, is expressed in stronger, tenderer, and more delicate strokes. Every now and then a note of the nineteenth century seems to mingle its tone with those of the twelfth; as if the ancient Oriental melody were reproduced on a modern European instrument. But it is very striking to see, and much more to feel, how close the thought and the sentiment of the Persian poet often are to the thought and sentiment of our own day. So that in its English dress it reads like the latest and freshest expression of the perplexity and of the doubt of the generation to which we ourselves belong. There is probably nothing in the mass of English translations or reproductions of the poetry of the East to be compared with this little volume in point of value as *English* poetry. In the strength of rhythmical structure, in force of expression, in musical modulation, and in mastery of language, the external character of the verse corresponds with the still rarer interior qualities of imagination and of spiritual discernment which it displays.

It needs no further introduction. The English Omar gives us one hundred and ten quatrains in all, from which the following citations are selected: —

"Wake! for the sun behind yon eastern height
Has chased the session of the stars from night;
And, to the field of heaven ascending, strikes
The sultan's turret with a shaft of light.

"Come, fill the cup, and in the fire of spring
Your winter garment of repentance fling:

The bird of time has but a little way
To flutter, — and the bird is on the wing.

" Whether at Naishápúr or Babylon,
Whether the cup with sweet or bitter run,
The wine of life keeps oozing drop by drop,
The leaves of life keep falling one by one.

" Morning a thousand roses brings, you say;
Yes, but where leaves the rose of yesterday?
And this first summer-month that brings the rose
Shall take Jamshýd and Kaikobád away.

" Well, let it take them! What have we to do
With Kaikobád the Great or Kaikhosrú?
Let Rustum cry, 'To battle!' as he likes,
Or Hatim Tai, 'To supper!' — heed not you.

" With me along the strip of herbage strown
That just divides the desert from the sown,
Where name of slave and sultan is forgot, —
And peace to Máhmúd on his golden throne!

" Here with a little bread beneath the bough,
A flask of wine, a book of verse, — and thou
Beside me singing in the wilderness, —
O, wilderness were paradise enow."

" Some for the glories of this world, and some
Sigh for the prophet's paradise to come;
Ah, take the cash, and let the promise go,
Nor heed the music of a distant drum!

" Were it not folly, spider-like, to spin
The thread of present life away to win —
What? for ourselves, who know not if we shall
Breathe out the very breath we now breathe in!

" Look to the blowing rose about us. 'Lo,
Laughing,' she says, 'into the world I blow,
At once the silken tassel of my purse
Tear, and its treasure on the garden throw.' "

" The worldly hope men set their hearts upon
Turns ashes, — or it prospers; and anon
Like snow upon the desert's dusty face,
Lighting a little hour or two, is gone.

" Think, in this battered caravanserai
Whose portals are alternate night and day,
How Sultán after Sultán with his pomp
Abode his destined hour, and went his way.

" They say the lion and the lizard keep
The courts where Jamshýd gloried and drank deep;
And Bahrám, that great hunter, the wild ass
Stamps o'er his head, but cannot break his sleep.

" The palace that to heaven his pillars threw,
And kings the forehead on his threshold drew,
I saw the solitary ringdove there,
And 'Coo, coo, coo,' she cried; and 'Coo, coo, coo.'"*

" Ah! my belovèd, fill the cup that clears
To-day of past regret and future fears;
To-morrow! Why, to-morrow I may be
Myself with yesterday's seven thousand years.

" For some we loved, the loveliest and the best
That from his vintage rolling Time has prest,
Have drunk their cup a round or two before,
And one by one crept silently to rest.

" And we that now make merry in the room
They left, and summer dresses in new bloom,
Ourselves must we beneath the couch of earth
Descend, ourselves to make a couch — for whom?

" Ah, make the most of what we yet may spend,
Before we too into the dust descend:
Dust into dust, and under dust to lie,
Sans wine, sans song, sans singer, and — sans end."

" I sometimes think that never blows so red
The rose as where some buried Cæsar bled;
That every hyacinth the garden wears
Dropt in her lap from some once lovely head.

" And this delightful herb whose living green
Fledges the river's lip on which we lean, —
Ah, lean upon it lightly! for who knows
From what once lovely lip it springs unseen!"

" Myself when young did eagerly frequent
Doctor and saint, and heard great argument
About it and about: but evermore
Came out by the same door as in I went.

" With them the seed of wisdom did I sow,
And with my own hand wrought to make it grow;
And this was all the harvest that I reaped, —
'I came like water, and like wind I go.'

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* " This quatrain Mr. Binning found inscribed by some stray hand among the ruins of Persepolis. The ringdove's ancient *Péhlevi, Coo, coo, coo,* signifies also in Persian, 'Where? where? where?'"

"Into this universe, and *why* not knowing,
Nor *whence*, like water willy-nilly flowing;
And out of it as wind along the waste,
I know not *whither*, willy-nilly blowing.

"What! without asking, hither hurried *whence*?
And, without asking, *whither* hurried hence!
Ah, contrite Heaven endowed us with the vine,
To drug the memory of that insolence!"

"Up from earth's centre through the seventh gate
I rose, and on the throne of Saturn sate,
And many knots unravelled by the road;
But not the master-knot of human fate.

"There was the door to which I found no key:
There was the veil through which I could not see:
Some little talk awhile of ME and THEE
There was,—and then no more of THEE and ME.

"Earth could not answer, nor the seas that mourn
In flowing purple, of their Lord forlorn;
Nor Heaven, with those eternal signs revealed
And hidden by the sleeve of night and morn.

"Then of the THEE IN ME who works behind
The veil of universe I cried to find
A lamp to guide me through the darkness; and
Something then said, 'An understanding blind.'

"Then to the lip of this poor earthen urn
I leaned, the secret well of life to learn:
And lip to lip it murmured, 'While you live,
'Drink! for, once dead, you never shall return.'

"I think the vessel, that with fugitive
Articulation answered, once did live
And drink; and that impassive lip I kissed,
How many kisses might it take—and give!

"For I remember stopping by the way
To watch a potter thumping his wet clay;
And with its all-obliterated tongue
It murmured, 'Gently, brother, gently, pray!'"

"When you and I behind the veil are past,
O but the long, long while the world shall last!
Which of our coming and departure heeds
As much as ocean of a pebble-cast.

"And fear not lest existence closing *your*
Account, should lose, or know the type no more;
The Eternal Saki from that bowl has poured
Millions of bubbles like us, and will pour.

"And if the cup you drink, the lip you press,
End in what All begins and ends in, — yes;
Imagine then you *are* what heretofore
You *were*, — hereafter you shall not be less.

"So when at last the Angel of the drink
Of darkness finds you by the river-brink,
And, proffering his cup, invites your soul
Forth to your lips to quaff it, — do not shrink."

"And if in vain down on the stubborn floor
Of earth, and up to heaven's unopening door,
You gaze to-day, while you are you, — how then
To-morrow, when you shall be you no more?

"O, plagued no more with human or divine,
To-morrow's tangle to itself resign,
And lose your fingers in the tresses of
The cypress-slender minister of wine.

"Waste not your hour, nor in the vain pursuit
Of this and that endeavor and dispute;
Better be merry with the fruitful grape
Than sadden after none, or bitter fruit.

"The grape that can with logic absolute
The two-and-seventy jarring sects confute:
The sovereign alchemist that in a trice
Life's leaden metal into gold transmute."

"Strange, is it not? that of the myriads who
Before us passed the door of darkness through,
Not one returns to tell us of the road,
Which to discover we must travel too.

"The revelations of devout and learned
Who rose before us, and as prophets burned,
Are all but stories which, awoke from sleep
They told their fellows, and to sleep returned."

"I sent my soul through the invisible
Some letter of that after-life to spell:
And after many days my soul returned
And said, 'Behold, myself am Heaven and Hell.'

"Heaven but the vision of fulfilled desire,
And hell the shadow of a soul on fire,
Cast on the darkness into which ourselves,
So late emerged from, shall so soon expire."

" We are no other than a moving row
Of visionary shapes that come and go
Round with this sun-illumined lantern held
In midnight by the master of the show.

"Impotent pieces of the game he plays
Upon this checker-board of nights and days,
Hither and thither moves and checks and slays,
And one by one back in the closet lays.

" The ball no question makes of ayes and noes,
But right or left, as strikes the player, goes;
And he that tossed you down into the field,
He knows about it all, — *he* knows, HE knows!

" The moving finger writes; and, having writ,
Moves on: nor all your piety nor wit
Shall lure it back to cancel half a line,
Nor shall your tears wash out a word of it."

" For let philosopher and doctor preach
Of what they will, and what they will not, — each
Is but one link in an eternal chain,
That none can slip, nor break, nor overreach.

" And that inverted bowl we call the sky,
Whereunder crawling, cooped we live and die,
Lift not your hands to *it* for help, — for it
As impotently rolls as you or I.

" With earth's first clay they did the last man knead,
And there of the last harvest sowed the seed:
And the first morning of creation wrote
What the last dawn of reckoning shall read.

" Yesterday *this* day's madness did prepare, —
To-morrow's silence, triumph, or despair:
Drink! for you know not whence you came, nor why:
Drink! for you know not why you go, nor where.

" But this I know: whether the one true light
Kindle to love, or wrath consume me quite,
One flash of it within the tavern caught
Better than in the temple lost outright."

" What! out of senseless nothing to provoke
A conscious something to resent the yoke
Of unpermitted pleasure, under pain
Of everlasting penalties if broke!

" What! from his helpless creature be repaid
Pure gold for what he lent as dross allayed, —

Sue for a debt we never did contract,
And cannot answer, — O, the sorry trade!

"Nay, but for terror of his wrathful face,
I swear I will not call injustice grace;
Not one good fellow of the tavern but
Would kick so poor a coward from the place.

"O Thou, who didst with pitfall and with gin
Beset the road I was to wander in,
Thou wilt not with predestined evil round
Enmesh, and then impute my fall to sin?

"O Thou, who man of baser earth didst make,
And ev'n with paradise devise the snake:
For all the sin the face of wretched man
Is black with, man's forgiveness give — and take!"

"As under cover of departing day
Slunk hunger-stricken Ramazan away,
Once more within the potter's house alone
I stood, surrounded by the shapes of clay.

"And once again there gathered a scarce-heard
Whisper among them, as it were, the stirred
Ashes of some all but extinguished tongue,
Which mine ear kindled into living word.

"Said one among them: 'Surely not in vain
My substance from the common earth was ta'en,
That he who subtly wrought me into shape
Should stamp me back to shapeless earth again?'

"Another said: 'Why, ne'er a peevish boy
Would break the cup from which he drank in joy:
Shall he that of his own free fancy made
The vessel, in an after-rage destroy?'

"None answered this; but after silence spake
Some vessel of a more ungainly make:
'They sneer at me for leaning all awry;
What! did the hand then of the potter shake?'

"Thus with the dead as with the living, *What?*
And *Why?* so ready, but the *Wherefor* not.
One on a sudden peevishly exclaimed:
'Which is the potter, pray, and which the pot?'

"Said one: 'Folks of a surly master tell,
And daub his visage with the smoke of hell;
They talk of some sharp trial of us, — pish!
He 's a good fellow, and 't will all be well.'

" 'Well,' said another, 'whoso will, let try,
My clay with long oblivion is gone dry:
But fill me with the old familiar juice,
Methinks I might recover by and by!'

" So while the vessels one by one were speaking,
One spied the little crescent all were seeking:
And then they jogged each other, 'Brother! brother!
Now for the porter's shoulder-knot a-creaking!'" *

" Alas! that spring should vanish with the rose!
That youth's sweet-scented manuscript should close!
The nightingale that in the branches sang,
Ah, whence, and whither flown again, who knows!

" Would but the desert of the fountain yield
One glimpse, if dimly, yet indeed revealed,
Toward which the fainting traveller might spring,
As springs the trampled herbage of the field!

" Ah, with the grape my fading life provide
And wash my body whence the life has died,
And lay me, shrouded in the living leaf,
By some not unfrequented garden-side.

" Whither resorting from the vernal heat,
Shall old acquaintance old acquaintance greet,
Under the branch that leans above the wall
To shed his blossoms over head and feet.

" That ev'n my buried ashes such a share
Of vintage shall fling up into the air,
As not a true believer passing by
But shall be overtaken unaware."

" O, if the world were but to re-create,
That we might catch, ere closed, the Book of Fate,
And make the writer on a fairer leaf
Inscribe our names, or quite obliterate!

" Better, O better cancel from the scroll
Of universe one luckless human soul,
Than drop by drop enlarge the flood that rolls
Hoarser with anguish as the ages roll.

" Ah love! could you and I with fate conspire
To grasp this sorry scheme of things entire,

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* " At the close of the fasting-month, Ramazan, the first glimpse of the new moon is looked for with the utmost anxiety and hailed with acclamation. Then it is that the porter's knot may be heard — toward the cellar, perhaps."

Would not we shatter it to bits, and then
Remould it nearer to the heart's desire!

"But see! the rising moon of heaven again
Looks for us, sweetheart, through the quivering plane:
How oft hereafter rising will she look
Among those leaves — for one of us in vain!

"And when yourself with silver foot shall pass
Among the guests star-scattered on the grass,
And in your joyous errand reach the spot
Where I made one, — turn down an empty glass!"

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4. — 1. *Friedrich Rückert und seine Werke.* Von C. Fortlage. Frankfurt am Main: J. D. Sauerländer's Verlag. 1867. 12mo. pp. vi., 182.
2. — *Friedrich Rückert. Ein biographisches Denkmal.* Von Dr. C. Beyer. Frankfurt am Main: J. D. Sauerländer's Verlag. 1868. 8vo. pp. xvi., 471.
3. — *Friedrich Rückert's Gesammelte Poetische Werke. Erste Gesammtausgabe.* Frankfurt am Main: J. D. Sauerländer's Verlag. 1869. 12 Bände. 8vo.

Friedrich Rückert died at Neusess, January 31, 1866. During the three years that have elapsed since his decease, the most widely diverse opinions have been expressed as to the character of his poetic faculty and the nature and extent of his influence on German letters. While some critics have assigned him a niche in the Walhalla of illustrious *Musensöhne* by the side of Goethe and Schiller, others have failed to discover in him any original creative power, except a certain talent for form, a peculiar vigor and ingenuity as a neologist, a facile exuberance of rhymes and metres, and a remarkable virtuosoship in language; which, however, have too often tempted him into excessive artificialities and affectations of style, and into verbal quirks and quibbles extremely offensive to the purists, and corrupting to the younger generation of poets, who, in taking him as their model, have, like all servile imitators, exaggerated the defects which they copied.

But, however much truth there may be in these strictures, nothing certainly could be more unjust than to hold Rückert responsible for the pompous and weary platitudes of feeble imitators, who embody their languid sentimentalities in Oriental metres, and imagine that they have fathomed the depths and caught the spirit of Persian poetry because they praise the roses of Shiraz, talk of houris and peris, apostrophize the nightingale as the bulbul, and dignify that peculiar species of Teu-

tonic crapulence known as *Katzenjammer* with the name of *bidamagbuden.** As well might we call Goethe to account for all the *malheurs de l'amour* which have afflicted society and literature since the publication of Werther, or make Schiller amenable to an indignant posterity for the morbid pathos and bombastic iambics of Ernst Benjamin Salomon Raupach.

The peculiar source of Rückert's poetic inspiration is a fine sympathy with nature, awakened and fostered in him by the influences which surrounded his early life in the beautiful valley of the Main, with its green meadows and vine-clad hills and mediæval cities, not more refreshing to the eye on account of its picturesque and romantic scenery than charming to the imagination as the seat of poesy and the home of the Muses. In the first section of his volume, Dr. Beyer gives a full and in many respects interesting account of Rückert's youth, his education at home, at school, and especially in the woods and fields, the local legends on which his imagination fed, and the characteristics and customs of the villagers who used to speak of father Rückert and his sons as "the tall stork with its storklings." These little incidents artistically woven together furnish a fine *genre*-picture of village life in Germany towards the close of the last century, and help us also to understand more perfectly some of the salient features and idiosyncrasies of the man. But in this connection our author makes a strange blunder on page 28, where he quotes three Latin verses, and affirms that they were written by Rückert in 1802, i. e. in the fourteenth year of his age. The verses are the following, —

> "Esse deos credamne, fidem quum laeserit illa?
> Quam longos habuit nondum perjura capillos,
> Tam longos postquam numina laesit, habet," —

and are cited by the biographer as "das älteste Denkmal von der Hand des Knaben," called forth by the pangs of disappointed affection. We certainly recognize in them a very "old monument" expressive of sentiments as old as the human race; for by referring to Ovid's *Amores* (III. 3. 1 – 4.) we read how the graceful and susceptible Roman elegist felt under similar circumstances, *de amica quæ pejeraverat:* —

> "Esse deos i crede; fidem jurata fefellit,
> Et facies illi, quæ fuit ante, manet.
> Quam longos habuit nondum perjura capillos,
> Tam longos, postquam numina laesit, habet."

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* Immermann satirizes the Orientalism of Platen and his school in the following *xenion*: —

> "Von den Früchten, die sie aus dem Gartenhain von Schairas stehlen,
> Essen sie zu viel, die Armen, und vomiren dann Ghaselen."

This description, though unjustly applied to Platen perhaps, fitly characterizes the smaller fry of pseudo-Oriental poets.

Some editions of Ovid have *esse deos credamne*, which, however, is regarded by critics as a corrupt text. Evidently the youthful Friedrich, wounded by the fickleness of his "blue-eyed Annel," wrote these lines from memory, omitting the first pentameter, and not dreaming that, more than half a century later, they would reappear in print as an original production.

In Rückert's "Juvenile Poems," dating from 1807, there prevails to some extent the same elegiac-sentimental tone that pervades all the lyrics of Matthisson, Tiedge, and Salis-Seewis, but with less monotony of melancholy and far richer variety of contents and form. Of these early efforts, the most characteristic are those in which the world of elves and wood-nymphs and water-sprites is described, in strophes whose rhymes and intonations fall upon the ear like echoes from fairy-land. Rückert's later attempts to treat the same popular legends in ballads are enfeebled by excessive prolixity, the radical vice of all improvisators. In the war sonnets (*Geharnischte Sonnette*) of 1814, which appeared under the *nom de guerre* of Freimund Reimar, he showed a marvellous power of pouring his glowing thoughts and feelings into the narrowest and most inflexible form of verse, employing, as the vehicle of martial and patriotic sentiments, the soothing quatrains and tercets which, since Petrarch, had been used only to express the tenderest idyllic and erotic emotions. The chief defect of these poems is lack of simplicity and directness. The exuberance of the style, the surprising ingenuity and continuous jingling of the rhymes, the strange conceits and wealth of imagery which distinguish them, impress the reader with a disagreeable sense of fictitiousness and jugglery. In reality neither Arndt nor Körner was more in earnest than this seeming dilettante. "A special predilection for lyric poetry," says Goethe, "is a symptom of dilettanteism." The danger here indicated is the tendency of extremely subjective poetry to lapse into mere prettinesses. Yet Goethe himself was pre-eminently a lyrical poet, endowed with the finest faculty of detecting the delicate affinities that unite the world of sense to the world of imagination and exalt the commonest objects to a companionship with the phantasies of the dreamy mind. In the poet's vision, as in the apostle's trance, there is nothing "common or unclean." Even "the tender horns of cockled snails" are used by Shakespeare to illustrate the sensibilities of love, and are so dignified by his touch as to be worthy of a place in one of his noblest passages, side by side with the Hesperides and Apollo's lute. He understood the conversation of the plants, and knew the secret of every young rose; he sympathized with the dying "bud bit by an envious worm"; his eye discovered "the crimson drops i' the bottom of a cowslip," and transformed them into

the "mole cinque-spotted" on the fair bosom of the sleeping Imogen. In this respect, Rückert's genius was akin to Shakespeare's, as is shown especially in such lyrics as "Die sterbende Blume," "Frühlingslied," and "Abendlied." He has imparted new life and meaning to the forms of nature, by filling them with the precious substance of his mind; the luxuriance of his unparalleled diction has overgrown and beautified the whole face of things, like an ivy that mantles everything with its verdure, leaving no surface uncovered, no pinnacle unclimbed, no chink unpenetrated.

In opposition to the nonchalance in rhythm and rhyme which degrade some of Heine's verses to the level of doggerel, Rückert laid great stress upon form, which he regarded as the "keystone" of every poetic creation: —

> "Grundstein zwar ist der Gehalt,
> Doch der Schlussstein die Gestalt."

Also in the "Lieder und Sprüche" he declares it to be his peculiar mission to invent and introduce new forms of metrical expression, and thus "increase the treasury of human speech."

> "Ein neuer Reim, ein neuer Satz
> Dünkt mich ein Zuwachs jenem Schatz;
> Ein andrer wirk' in andern Sphären,
> Doch, ich bin hier an meinem Platz."

The importance which he attached to the merely mechanical part in versification, and the facility with which he wrote everything *druckreif*, very seldom retouching his work with the file, often caused him to neglect the substance of his compositions. A poet who publishes nearly six hundred lyrics in two successive years (as was the case with Rückert during 1832 and 1833) cannot devote much time to polishing or profoundly meditating his productions. Yet even here the reader is charmed by the musical flow of the phrase, however trite and prosaic the sentiments expressed, —

> "Anmuthig werden selbst alltägliche Sentenzen
> Im Silberwasserfall melodischer Cadenzen," —

although the passing thought may be as commonplace as the lamentations of an author over the want of good quill-pens. (*Weisheit des Brahmanen*, III. 68.)

Rückert, too, was the most cosmopolitan of German poets. In Scandinavia, Greece, Arabia, Persia, Palestine, India, and China, he was as much at home as in his own fatherland on the banks of the Main. The wide range of his intellectual sympathies, more universal even than Herder's, embraced almost every form of speech in which the mind of man has left a record of itself.

"Was dem Griechen Ohrenschmaus
War, vom Helikone,
Dem Brahmanen Ganga-Braus
Unter Palmenkrone,
In der Wüste Geistergraus
Hagar's freiem Sohne,
Zaubr' ich, dass im deutschen Haus
Es mit Einklang wohne."

The fruits and flowers of poesy from every zone grew under his artistic hand, not into the wanton luxuriance of a tropical jungle, but into a rich and delicious garden, where the native perfumes of Hymettus and the Himalayas mingle with

"Sabean odors from the spicy shore
Of Araby the blest."

He put all nations and races under tribute, and, in his own words, "took spiritual tithes (*Geisteszehnten*) of the East and of the West."

In fertility and ingenuity as a neologist, Rückert surpasses Luther, and is second only to Fischart, whose neologisms are all indigenous growths, and spring up spontaneously and symmetrically out of German roots, whereas those of Rückert are Oriental exotics, — scions of the banian grafted upon the Hercynian oak. Thus in "Nal und Damajanti," an episode of the "Mahabharata," the heroine is protrayed as

"Die Gliederzartwuchsrichtige,
Vollmondsangesichtige,
Gewölbtaugenbraunbogige,
Sanftlächelredewogige."

The horses also are described as

"Derbmagere, schwernachhaltige,
Unfeine, wegesgewaltige,
Breitnasige, starkkinnbackige,
Langschenklige, hochnackige,
Haarstruppige, mähnenstraubige,
Windstürmige, flammenschnaubige."

Expressive as these colossal epithets are, euphonious and easily intelligible as they may be to the ear of the Sanskrit scholar, and interesting as is the evidence which they furnish of the plasticity of the German language, they present a very strange aspect to the eye, and produce a very bewildering effect upon the mind of the ordinary reader. Yet even these gigantic polysyllables are models of chasteness and elegance when compared with Platen's "Demagogenriechernashornsangesicht" and "Obertollhausüberschnappungsnarrenschiff," or the foreign words and phrases which give to some of Freiligrath's poems a macaronic appearance bordering upon burlesque. The same

repulsive effect is produced also by an excessive use of diminutives, as e. g. in the "Oestliche Rosen," in the *gasel* "Der gescheiterte Kuss," the rhymes, *Adamsrippchen, Lippchen, Schnippchen, Nippchen, Perlenklippchen*, etc., follow each other *usque ad nauseam*, and seriously hinder the enjoyment of these otherwise charming lyrics. Rückert's "Eastern Roses" and other Oriental poems owe their origin partly to the impulse given to German literature by Goethe's *Westöstlicher Divan* (1818), and partly to the interest which Rückert took in Oriental studies both as professor and *Privatgelehrter*. One of the first and finest fruits of these scholarly pursuits was a free translation of the Arabian poet Hariri, which Rückert himself refers to as an illustration, —

> "Wie Poesie und Philologie einander zu fördern
> Und zu ergänzen vermag."

In "Rostem und Suhrab" we have a still freer translation of the most touching and tragic episode in Firdusi's great epic, "Shah-Nameh"; in the poetic breviary (Mesnewi) of "Mewlana Dschelaleddin Rumi," on the contrary, Rückert not only enriched European literature with a new metrical form (the *gasel*), but also opened to the Western mind the sources of Persian mysticism in this revered oracle of the Sufies and illustrious founder of the Dervish order of the Mewlewi. The German poem reproduces admirably the spirit of this Persian sect, in whose writings the quietistic fervor and devotion of Islam are blended with the transcendent fascination and speculative subtlety of Platonic idealism. As a specimen of the peculiar versification of the *gasel*, in which the rhyme of the first two lines is repeated in the fourth, sixth, eighth, etc., to the end of the poem, we may cite the following, entitled "Der Schmuck der Mutter": —

> "Mensch! es ist der Schöpfung Pracht
> Nicht für dich allein gemacht.
>
> "Einen Theil hat sich zur Lust
> Die Natur hervorgebracht.
>
> "Darum singt die Nachtigall,
> Wo du schlummerst, in der Nacht.
>
> "Und die schönste Blume blüht,
> Eh' des Tages Aug' erwacht.
>
> "Und der schönste Schmetterling
> Fliegt, wo Niemand sein hat Acht.
>
> "Perle ruht im Meeresschooss,
> Und der Edelstein im Schacht.
>
> "Kind! da reichlich Aug' und Ohr
> Dir mit Füllen ist bedacht;
>
> "Gönn' der Mutter Etwas auch,
> Das sie zum Geschmeid sich macht."

The rich veins of aphoristic wisdom which run through the *Gaselen*, and which impart, indeed, a peculiar philosophic coloring to all the lyric poetry of the East, were especially attractive to Rückert, who, whatever rank he may take in other departments of literature, is unquestionably the greatest didactic poet of modern times. This reflective and gnomic tone pervades all his poetry; even his lyric verse constantly verges upon the didactic, as that of Uhland glides insensibly into the epic, or that of Freiligrath takes a descriptive and panoramic character. In the "Brahmanische Erzählungen," and other translations from Hindu epopees, this tendency is very marked, particularly in the fondness — sliding into diffuseness — with which he portrays the life and doctrines of the gymnosophists, "die nackten Weisen." But it is in the "Weisheit des Brahmanen" that this poetic contemplativeness finds its fullest expression. In this congeries of sententious monologues, Rückert, sitting as it were in Brahmanic garb on the banks of the sacred Ganges, pours forth in alexandrines the mature results of his ethical studies and metaphysical speculations. All the relations and conditions of man in respect to age, rank, race, sex, religion, politics, and society, — every thought, feeling, and situation belonging to human life, — receive here new illumination. There is scarcely a system of theology or philosophy in the spiritual and intellectual history of mankind that is not touched and transmuted by his imagination; as the sun

> "plays the alchemist,
> Turning, with splendor of his precious eye,
> The meagre cloddy earth to glittering gold."

Our limited space does not permit us to illustrate this statement by citation, and we must therefore content ourselves with a few references which the reader may easily verify. Thus we find allusions either confirming or confuting the pre-Socratic speculations of Thales, Anaximander, and Anaximenes in their efforts to discover the original and universal essence of things (W. d. Br., II. 29), the perpetual flux and reflux of Heraclitus (III. 61), the negative and barren cynicism of Antisthenes (XVII. 21), sarcasms like those which Xenophanes, the Eleatic, directed against anthropomorphism and anthropopathism (VIII. 7, XIII. 21), the psychology of Plato (II. 28, VIII. 14, XI. 2, XII. 50) the Cartesian *cogito, ergo sum* (VIII. 18), the monadology of Leibnitz as opposed to the atomism of Epicurus (XI. 2), the sensationalism of Hobbes, Gassendi, and Locke (XX. 12), the τὸ ἓν καὶ τὸ πᾶν of Spinoza (V. 19), the "Ding an sich" of Kant (V. 18), the subjective idealism of Fichte (VIII. 17), Schelling's "intellectual intuition" and identity of thought and being (XVII. 39), conceptions and relations of space and

time (XVII. 28, VIII. 20), the materialism of La Mettrie and the sensualism of Condillac (XVII. 5); in fine, one might easily collate from the twenty books of this poem a survey of the principal systems of philosophy that have prevailed, from the crude physics of the Ionic school to the absolute idealism of Hegel, including also the tenets of Persian mystics, Chinese moralists, and Indian gymnosophists, as well as rationalistic theories of revelation (XVII. 6, 43, XIV. 64) and biblical exegesis (IV. 34), and the most earnest admonitions to tolerance and humanity (II. 10, X. 55). Rückert's antipathy to the proselyting spirit of "stupid zealots" was as decided as that of Lessing, or of Anastasius Grün (e. g. in "Spaziergänge eines Wiener Poeten," p. 14). Nature, he says, has provided suitable food for every animal and proper nourishment for every soul; but evangelical proselytism refuses to recognize this fact and seeks to impose on all races of men a uniform spiritual diet.

"Wenn ihr unter Menschenheeren
Nichts mehr findet zu bekehren,
Werdet ihr noch aus den Affen
Eine Art von Christen schaffen."

In another poem, he proclaims himself a heathen in the same sense and for the same reason that this term has been applied to Goethe: —

"Ihr machtet es mir zu toll
Mit euerm christlichen Leide:
Mein Herz ist noch freudenvoll;
Darum bin ich ein Heide.
Bricht einst mein Lebensmuth,
Dann könnt ihr vielleicht mich erwerben,
Denn eure Lehr' ist gut
Zu nichts auf der Welt als zum Sterben."

He finds more devotional inspiration in the free mountain air than in the gloomy atmosphere of the charnel-house: —

"Meine Andacht lodert
Nicht, wo Grabduft modert,
Sondern Bergluft weht."

As regards the Erlangen theologians, he declares it to be the only sound principle of dogmatics, that those who are so eager to light the fires of hell should burn in them: —

"Die christliche Kritik mag's anerkennen:
Wer so die Hölle heizt, verdient darin zu brennen."

Rückert's versified harmony of the gospels, "Leben Jesu, Evangelienharmonie in gebundener Rede," is an attempt to reconstruct poetically the life of Christ out of the purely moral elements which it contains, and which, lying outside of all questions of historic credibility, had not been

disturbed by the scientific criticism of Strauss. It is, however, an exceedingly unsatisfactory production, and hardly deserves to be called a work of art. The best thing that can be said of it is that it gave the originating impulse to Leopold Schefer's "Laienbrevier" and to the "Laienevangelium" of Friedrich von Sallet.

Rückert too, like Shakespeare, had his Midsummer Night's Dream, or *Vision in der Johannisnacht*, in which he reveals to us, not a world of fantastic contrasts, — kings, queens, fairies, and "rude mechanicals," Oberon, Titania, "gentle Puck," and "sweet bully Bottom," — but the growth and education of humanity in races and nations, a philosophy of universal history based upon the fundamental idea that the progress of civilization is an advance from homogeneity to heterogeneity in accordance with a well-established law of evolution. A reminiscence of this division and differentiation of mankind has been preserved in legend under the symbol of a building in the erection of which the intelligent and harmonious co-operation of the architects was broken up. The work on this splendid, heaven-aspiring edifice of human culture ceased, and, in the general confusion that ensued, each man took what suited his taste and purpose, and thus they were all "scattered abroad upon the face of the whole earth": —

"Der Eine trug ein Winkelmass,
Der Andre einen Hammer,
Und was der Dritt' als Schatz besass,
War irgend eine Klammer,
Und irgend ein zerbrochner Schaft,
Und was in Eil' er aufgerafft;
So trugen sie die Pfänder
Zerstreut in alle Länder."

With these tools and materials they have been building ever since, each in his own way, structures of religion, politics, society, industry, and literature, in India, Egypt, Greece, Rome, and other countries of ancient and modern times. The poet in his vision describes the peculiar features of these various types of civilization as stages of development or styles of architecture in the sublime temple of humanity. Vivid and almost dithyrambic in its impetuous fervor is the delineation of the Crusades and of their results as displayed in mediæval art and poetry, Gothic cathedral and *Minnesang*, and in those miracles of form and color which sprang into being on wall and canvas, when "Michael, the most terrible of the cherubim, and Raphael, the brightest of the seraphim, entered as painters into the service of the Church."

Rückert's dramas, "König Arsak von Armenien," "Saul und David," "Herodes der Grosse," "Kaiser Heinrich IV.," and "Christoforo Colombo," have a close logical connection with the Midsummer

Night's Dream, inasmuch as the themes chosen represent great epochs in the history of the human race; such as the institution of monarchy, the establishment of a hierarchy, the rise of Christianity, and the discovery of the New World. To these might be added the Aristophanic comedy "Napoleon," and the cycle of five dramas entitled "Die Sächsischen Kaiser," of which, however, only "Heinrich I." and a part of "Otto der Grosse" were finished. It is only in a modified sense that the term "drama" is applicable to these productions; they resemble rather a kind of literary oratorio, in which the musical element is predominant and serves to connect a series of historical pictures, with no attempts at psychological portraiture or the solution of dramatic intrigues. In this respect we might compare them with the earliest Greek tragedies, the "Persians" and "Prometheus" of Æschylus, in which there is neither well-developed plot nor fine individual characterization, but simply an epic delineation of scenes and events following each other in chronological succession and united by the dithyrambic lyrics of the chorus. The passions portrayed in the sonnets and erotics of Shakespeare indicate the sources of experience from which he drew his exhaustless knowledge of the world and of the soul. Goethe is never so genuinely dramatic as when he depicts feelings and circumstances akin to the errors and discords of his own youth. Rückert's nature was too spotless, his life was too free from inner conflicts and from those strong emotions which quicken the pulse and thrill in every sense, to develop in him the dramatic faculty. His inspirations were as pure as the breeze that moves the Æolian harp to melody. The sophistries of passion and the dialectics of extenuation, which underlie the great tragedies of human life, were wholly foreign to him. Consequently his plays are utterly destitute of the action which grows out of such antagonisms and of the motives by which they are excited and determined. It is safe to say that more monotonous and tedious productions have not appeared in German literature since Klopstock wrote his bardic hymns and biblical dialogues.

Dr. Beyer's volume contains an interesting comparison of Rückert with Goethe, Heine, Platen, and Uhland, in which he endeavors to fix his place among the coryphæi of the German poets, and a chapter on his influence as pedagogue in the best and broadest sense of that much-abused word. In the Appendix we have also twenty-three pages of hitherto unpublished poems, chiefly *Gelegenheitsgedichte*, of no great intrinsic worth. Rückert's correspondence gives a charming picture of his simple, idyllic home life. These letters have a literary value as the only specimens of the poet's admirable prose. On the whole, Dr. Beyer's book is the fullest and, indeed, the only real

biography of Rückert that has yet appeared. The chief defect consists in the frequent references which are made to the author's "Friedrich Rückert's Leben und Dichtungen," published several years ago. It is exceedingly annoying to the reader to be constantly informed that this point is cleared up or that poem analyzed in some previous monograph which he does not possess. Every biography should be complete in itself, so far at least as essential points are concerned. Professor Fortlage's little volume aims to give a critical survey of Rückert's works in their logical and chronological connection, and accomplishes this purpose in an excellent manner and with truly philosophical comprehensiveness. The *Gesammtausgabe*, just issued by Sauerländer at Frankfort, has been arranged with studious care, and is the first edition printed from original manuscripts preserved and corrected by Rückert himself. All former editions have been printed from copies of them which did not even have the benefit of the poet's subsequent revision, and are therefore more or less defective.

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5. — *Pre-historic Nations; or, Inquiries concerning some of the great Peoples and Civilizations of Antiquity, and their probable Relation to a still older Civilization of the Ethiopians, or Cushites, of Arabia.* By John D. Baldwin, A. M. New York: Harper and Brothers. 1869. 12mo. pp. vii., 414.

This volume might quite as properly have been styled "The Prehistoric Nation." By some means or other, Mr. Baldwin has persuaded himself that there was a certain people in olden time to whom is to be credited nearly the whole of ancient civilization, and whose claims to honor have hitherto been strangely overlooked by all students of antiquity. This people he calls Cushites; and he assigns them as their country the conveniently situated peninsula of Arabia, whence their influence radiated in all directions, — through India and Farther India on the one side, and to the most distant borders of Africa and Europe on the other.

How Mr. Baldwin has arrived at this persuasion does not appear. That any good and sufficient reasons for it are set forth in his book, no intelligent and cautious reader will be inclined to admit. Hardly a single one even of the minor points involved in the grand theory receives a satisfactory establishment. The author's methods of proof are more curiously subjective than those of any writer we have read in a long time. His arguments are mainly reducible to three. First, such and such things "must have" been so and so (for example, the Phœnicians must have possessed the mariner's compass, and must have circum-

navigated Africa; and ancient star-gazers must have had telescopes): if we do not quite see the necessity, so much the worse for us. Secondly, certain other things are generally acknowledged; or, all competent authorities agree to them: and the points thus assumed to be settled by common consent, and no longer calling for even a show of argumentation, are apt to be of the most obscure or questionable character, or of the widest bearing, involving the author's whole thesis; so that we cannot help fancying that the class of competent authorities is in each case a very limited one, consisting of Mr. Baldwin himself and some person whose views are accepted by him. Thirdly, those who put faith in the old systems of chronology, founded by Usher and others on the Hebrew Scriptures, are roundly denounced; and, on the other hand, those are not less accused of stupid incredulity and unreasoning scepticism who shall doubt, as insufficiently founded, the new Cushite theory: over and over again we are warned, in nearly equivalent phrase, that "nothing is so liable to absurd exhibitions of credulity and unreason as morbid scepticism directed by invincible prejudice."

Many times, too, we are informed that "various important considerations" lead us to take a certain view, no hint being vouchsafed us of what these considerations are. Or that peculiar line of reasoning is employed which consists in first suggesting something as probable, then presently repeating it as true without reservation, and finally treating it as undeniable, and drawing from it momentous conclusions.

That our description of Mr. Baldwin's method is no caricature, we appeal to every sober-minded reader of his work to attest. Of penetrating and unprejudiced research, of cautious induction, of critical estimate of authorities, we find here no trace. If historical science, if the study of antiquity, has made any noteworthy advance during the past half-century, this volume is to be set aside as valueless: for it exhibits a complete return to the old method of antecedent persuasion, and special pleading in its establishment and defence. Mr. Baldwin tells us that "scepticism is neither the middle nor the end of true philosophy; historical criticism should be able not only to destroy falsehood, but also to establish truth"; and he has evidently written under the urgent promptings of this conviction. We believe, however, that no duty or obligation whatever rests upon historical criticism, except simply to do what it can with the materials at its command, not striving either to build up or to pull down, but aiming only to distinguish what is true from what is false. If its activity is in so large measure destructive, it is because there have been so many incautious constructors whose work needs to be cleared away. We have no whit more of respect for Usher's chronology than Mr. Baldwin has; but if our choice is to lie only between the

Hebrew traditions as interpreted by Usher, and the Hindu Puranas as interpreted by Wilford, we shall not long hesitate to prefer the former; and we deem the worst of the theories which Mr. Baldwin rejects and derides equally stable with the splendid edifice of Cushite civilization which he has reared upon so narrow and inadequate a foundation of facts.

We cannot, upon the whole, commend this book either to those who are versed or to those who are unversed in the study of the past. For the former, it is too much a congeries of assumptions and assertions, without new facts or new groupings of facts; and the latter would be bewildered by it, not knowing how to distinguish what is good in it from what is bad. We should admire the author's fearlessness and independence of opinion, if he were less dogmatic and denunciatory.

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6. — *History of Charles the Bold, Duke of Burgundy.* By John Foster Kirk. With Portraits. Philadelphia: J. B. Lippincott & Co. 1868. Vol. III. 8vo. pp. viii., 555.

Mr. Kirk's third volume embraces a period of little more than two years, as it opens at the end of October, 1474, and closes on the 12th of January, 1477, the day on which the Duke of Burgundy was buried at Nancy. The scale on which this work is prepared, considered as biography, is not too large; considered as history, — and the biography of Charles of Burgundy necessarily belongs to history, — it is far larger than it should be. Had Mr. Kirk retrenched his work throughout, he could have dispensed with a third volume; and such retrenchment might have been made without sacrificing anything really useful. He is fond of introducing explanations that are not needed, and of making suggestions which often are superfluous, and occasionally impertinent. We frankly admit that we have read with much pleasure most of the matter which we complain of as superfluous in its present place; but the fact that it is often instructive, and not unfrequently entertaining, does not render its appearance in the "History of Charles the Bold" any the less inartistic, while it swells the work unduly, and thus gives countenance to that practice of making big books which is one of the serious evils of the time. Mr. Kirk, too, might have omitted what we may call his exclamatory matter, with some gain of space, and with great improvement in point of taste. His third volume abounds in rhetoric which would be offensive in a sensational novel, and is unpardonable in a grave history. We have in profusion passages like the following: "Shade of Nicholas von Diesbach, listen, and

echo from thy Elysium this fresh proof of the graciousness of thy patron! Nay, lie still, heroes of Morgarten and Sempach! Wake not, challenge not the statement!" — "*Piano, piano*, O penetrating diplomatist!" — "Might he not, by protracting the contest, weary down or outlive his antagonist? — Might he not — Ah, no! Another might, — another, who had never soared so high to fall so low; who had never taken between his teeth the bit of destiny and felt its inexorable lash; whose heart, in either fortune, had beat with the steady pulsations of a machine; such a one, — not he!" — "At the head [of Charles's tomb] is another tablet. It contains the motto which he had adopted at the time of his accession, when the future was radiant with triumphs to be won, to be enhanced by arduous struggles. *Je l'ay emprins, — bien en avienne!* — 'I have undertaken it, — may good come of it!'. . . . Alas! . . . . Alas!" And so on, until the reader becomes as weary of the sight of an exclamation-point as ever the Duke of Burgundy was of the sight of a Swiss spear.

The task which Mr. Kirk set himself was the rehabilitation of Charles the Bold. He undertook to answer the question, which has been mentally put by every man who has made himself tolerably familiar with the history of Europe in the fifteenth century, — why it was that the career of Charles the Bold, which might have been so brilliant, passed almost beyond tragedy into the region of the ludicrous. He was master of the best part of Europe to the north of the Alps. Among his subjects were included the best artisans and the best soldiers of his time. The sinews of war he possessed in profusion, both in men and in money. His position and his power were such that, had his abilities enabled him to profit by them, he must have seriously modified the history of the world for the last four centuries. Yet in his last years, when he should have been able to accomplish anything, he failed in everything that he undertook, like "the Swede," perishing before "a petty fortress" and by "a dubious hand."

So complete a failure, with means so ample to command success, is one of the curious problems of history. Mr. Kirk undertook to solve it; but we cannot congratulate him on the result of his labors. He has been wellnigh as unsuccessful as his hero. He has produced a book that men will read with pleasure, and to a certain extent with edification; but he has left a perplexing question pretty much where he found it. In some matters he has made it clear that Charles was neither the bad man nor the foolish man that it has been supposed that he was; but on the point of chief interest, why he fell from "the solar height," he has thrown no satisfactory light.

His third volume, with which we are now concerned, is the history

of Charles's fall; and almost every incident in that history shows that the Duke had not one great quality. It is a story of wellnigh constant defeat; and on each important occasion the Burgundian did the work of his foes, by placing himself in positions in which victory was impossible, and defeat was ruin. He could neither win a field, nor retreat from a field that he had lost. Judging him by the events of the last two years of his life, we should say he was simply the worst commander that ever led brave men to certain destruction. At Grandson he was the victim of one of the strangest panics that ever occurred in the history of war. The greater part of his army literally vanished from the field, without even attempting to fire a shot or strike a blow. This fact alone would show that Charles must have been a wretched general, for the force that thus dispersed was not a body of raw youths like the American national force at our first battle of Bull Run, but one which must have contained an unusually large proportion of veteran soldiers, and was led by experienced officers. Mr. Kirk (275, 276) briefly but clearly shows that the Duke comprehended the importance of the task he had undertaken, and that he spared no pains to make his army a serviceable force; yet that army ran away at the first sight of a part of the Swiss army. Had the panic arisen at the close of a hard-fought day, there would have been nothing strange in it, panics being common at the crisis of a battle; but the one at Grandson occurred at the very moment when the main battle should have commenced. The conclusion to which the narrative leads is, either that the Duke had no moral command over his men, or that he did not know how to handle an army. In neither case could he have been a great soldier, and yet his fame rests almost entirely upon his military exploits. After the whole Swiss army had appeared, Grandson was a mere flight and butchery, and all the efforts of Charles to rally his men were disastrous failures. Equally futile were his endeavors to defend his camp. Treason, not fear, he said, had led to the base defection of his army, "before the parties had even come to blows, and at the moment when the enemy was certain to have been routed." But this is the common cry of leaders who fail through their own incapacity; a battle fairly lost, if we accept the view of the vanquished, being almost unknown to history. But if, for argument's sake, we accept the Duke's account of the cause of his defeat at Grandson, would not that equally prove his incapacity as sovereign, statesman, and soldier? How came he to undertake a great war with an army so corrupted by treason that it could break up on its first battle-field and disappear as an organization? Was he so poor a judge of men, after having reigned for many years, that he could not distinguish between true men and false? Was he so

incapable a commander that he did not know the composition of the force upon which he had to rely for the success of those great plans which he is supposed to have had at heart? To say that his defeat at Grandson was due to treachery, is to charge him with deficiencies much more serious than incapacity as a general.

It was at Morat that the power of the Duke of Burgundy was effectually broken, and the particulars of the battle of Morat show that he lacked even the ordinary qualities of an ordinary soldier. Though he expected to be attacked, and had prepared for battle, he dismissed his troops after they had been under arms and in position for hours, because the Swiss had not assailed him at the time he had fixed for their assault! "Officers and men," says Mr. Kirk (p. 439), "dispersed to their quarters. Arms were laid aside; horses were ungirded and groomed; the booths of the sutlers were filled with throngs, draining the wine-casks as quickly as they were broached. Charles himself, contrary to the habits of his whole life previous to his recent illness, allowed his armor to be taken off, and was sitting at table in a loose robe when the alarm came from the front." Such was the condition of things brought about by orders of the Duke, issued in the immediate vicinity of an enemy from whom an attack was expected. No wonder that the Burgundian army was routed in a few minutes, or that more than half the men composing it were killed in a few hours, slain as they fled, or drowned in the lake, or smothered in the chimneys and ovens in which they sought to hide themselves, or shot, like "crows," in the trees which they climbed. The defeat and massacre were the consequence of the leader's utter unfitness to command men; nor can the charge of "treason" be here made to distract the world's attention from that leader's imbecility. Yet we are asked to believe that the man who could thus blunder was one of the great masters of the art of war!

The closing scene at Nancy illustrates, even more forcibly than Grandson and Morat, Charles's folly in planning, and his feebleness in executing. A wise man never would have gone to Nancy with means so limited as those at the Duke's command after his two great defeats; and a good soldier would have abandoned the siege when he found himself in danger of being assailed by a superior force. But Charles seems never to have thought seriously of the nature of the contest in which he was engaged. The Swiss would not have troubled him had he remained in his own dominions; they could be found only by being sought; and he sought them in Lorraine, whither they were bound in honor to go to the support of Duke René. Had he been able to lead thither a force equal to that which, six months earlier, he had led to

Morat, his course would have been intelligible on military principles and in harmony with ordinary political action; but to plunge into a new conflict with the Swiss at the head of a small army, and that army demoralized by the recollection of two recent defeats, was a proceeding that surprises us even in Charles the Bold. Loyal men about him advised him to withdraw from Lorraine, to fall back, in order that he might make a better spring; but he would not listen to them. "There was ruin on both sides," says Mr. Kirk; "but on one it was ruin and death, on the other it was ruin and disgrace." Perhaps this is a true statement of Charles's condition; but if so, it is fatal to his claim to be considered a great man. No great man ever would have put himself into a position in which ruin and disgrace were on the one side, and on the other ruin and death. Ruin and death he soon found. The Swiss and their associates swept the Burgundian army out of existence in a few minutes. There was hard fighting, in which the Duke bore himself like a valiant swordsman; but it was not war. He had no better claim to be considered a good soldier than could have been set up in behalf of the most wooden-headed spearsman in either army. There is much truth in the character which Scott makes Ludovick Lesly give the Duke, "a hot-brained, impetuous, pudding-headed, iron-ribbed dare-all," for he had the common military virtues in perfection; but in the higher military qualities he could not have been more deficient had he been an American politician striving to make his way into the Cabinet through the camp.

We have dwelt on the military part of the Duke of Burgundy's later life, because we think there is little else in that life which is noticeable. It would be easy to show that, what he was as a soldier, he was also as a statesman, — if indeed he had any pretensions to be considered a statesman, beyond the fact that he was born to rule. He is one of those historical characters who interest us because their positions would have enabled them to do much, had they only known how it was to be done. But for the fact that he was the son of Philip the Good, and was born at the close of the first generation of the fifteenth century, Charles would have been as unimportant and uninteresting a personage as ever misruled men. In that history of things which might have been, which has a singular fascination for a certain class of minds, there is nothing more striking than the possibilities that were involved in the position of the Duke of Burgundy in the third quarter of the fifteenth century. A really great man, with the opportunities of Charles the Bold, would have stamped his name upon Christendom for all time. A sagacious, prudent man would have accomplished all that it is supposed Charles aimed at or dreamed of, and perhaps more.

Even a man of ordinary character would have left his dominions to his successors intact, with all the chances which this would have implied that some one would arise among those successors who should do what has been done in these days by the chiefs of the houses of Carignano and Hohenzollern. But Charles was neither great nor prudent, nor yet was he an ordinary man. He was a man of some strong traits of character, but utterly unfit for the position to which he was born; and that he was born to it was a practical satire on the lottery of life. He had nothing heroic in his composition, save valor; and valor without sense to direct, or heart to control it, is an evil gift to a sovereign who is practicably irresponsible. Sensible men, who hold that rulers are accountable to God for the manner in which they discharge the greatest of trusts, must place him in the lowest rank of those princes who seem to have lived only to serve as warnings to sovereigns who are capable of profiting from the lessons to be found in the histories of others of their trade.

Charles was ruined so utterly as to change the course of history, because he was a man of little mind, who insisted upon playing against adroit antagonists a great game, to which he was wholly unequal. He was no match even for Edward IV., who, though a great soldier, was no statesman; and in comparison with his chief antagonist, Louis XI., he was a mere child. His fall is charged upon Louis, as if that were an offence in the French king; but Louis certainly had a right to thwart the Burgundian's schemes, the success of which would have been fatal to the greatness of France. Had Charles made himself a king, and acquired Provence, France must have descended to a second-class position, and perhaps have become part of the possessions of Charles, or of his successors. Probably that Austro-Burgundian line which rose so high in little more than forty years after the fall of Charles, — when Charles of Ghent became Emperor of Germany, — would have included France among its dominions; and something like a universal empire would have existed, the head of which would have crushed the Protestants, and have thrown the human race back two centuries. Louis XI. could not foresee this possible future in its details; but he could foresee enough to make him tremble for that France for which he had labored, and suffered, and sinned, so much. Accordingly, he set himself to defeat the schemes of Charles. He succeeded, and the world is under obligations to him because he warded off the greatest evil that could have befallen it. That he did not know what he was doing does not lessen the value of his work. Few men have anything like a correct conception of the character of their work; and Louis XI. was not more ignorant of what his labors were to lead to than were

Washington and William of Orange, Martin Luther and John Hampden. Louis, though eminently a religious man in the sense of being intensely superstitious, had nothing saintly in his character or conduct; but it would have fared ill with the saints who began to appear in the century after his death had he been worsted in his quarrel with Charles of Burgundy. Unwittingly, he was clearing the way for the Reformation; while Charles was the champion of the old order of things, and would have secured for it some centuries of additional life had Louis borne much resemblance to his father, or any resemblance to his son. Historical events are links in the great chain of human destinies; and it was as necessary for the ultimate triumph of freedom that the Swiss should succeed at Grandson, Morat, and Nancy, as it was that the English should destroy the Armada, and Americans be victorious at Saratoga and Yorktown.

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7. — *Die Alttestamentliche Literatur, in einer Reihe von Aufsätzen dargestellt.* Von THEODOR NOELDEKE. Leipzig. 1868. 8vo. pp. 270.

THE phrase "Old Testament literature" has an unpleasant and irreverent sound to many ears. Is the inspired "word of God" to be called "literature"? Are the utterances of seers and prophets to be classed with the works of poets and philosophers? May we criticise Genesis as we criticise the cosmogony of Hesiod, and speak of the songs of David as we do of the songs of Burns or Béranger? This reverential repugnance more than anything else has hindered the free study of the books of the Old Testament as mere literary productions. It is not easy for the critic to discard the idea that these books are to be judged by other than ordinary rules, and are not to be associated with works of human composition. In spite of canons of criticism, there will almost always be a presumption that a biblical book, even with the most evident literary defects, must have merit beyond the best of unbiblical books. But there are numerous other hindrances to the literary appreciation of the books of the Old Testament. Such hindrances are found in the arbitrary distinction between canonical and apocryphal books; in the ancient Jewish division into the Law, the Prophets, and the Hagiographs, which fixes as by authority the proper place of the separate books; in the customary arrangement of the books, which makes no account of their age, their subject, or their value; in the notion of their immediate and close connection with the books of the New Testament, which makes every event and person in the Old Testament the type of some event

or person in the new dispensation; and in the traditional ideas of their authorship, which continue to uphold the literary fame of the heroes of the Old Covenant, and teach that Moses wrote the Pentateuch, because these books tell of the laws which he gave, that David wrote the psalms sung in his court, and that Solomon spoke and compiled the proverbs of his reign. These theories and notions embarrass the student in his judgment of the true place and value of Hebrew books, and it is very difficult to be fairly rid of them.

There are Germans, nevertheless, who do get rid of them; and eminent in this class is the friend of Adalbert Lipsius, Theodor Noeldeke, professor at Kiel. All common prejudices concerning the sacred books he wholly discards, and he comes to the examination of them with the same cool judgment that he would bring to the examination of a collection of Greek or of Chinese books. He makes no apology for his classifications or his conclusions, and has no concern for the impression which will be made by his free criticism. He judges a psalm by what it is worth as a poem, and not by the doctrine which it contains; and when he sees a falsehood or an absurdity in the book which he is examining, he has no hesitation in calling it by its true name. The fact that Esther is in the canon does not prevent him from treating the book as an immoral and baseless fiction; and the fact that Daniel is reckoned among the greater prophets does not relieve the stories of the book of Daniel from the charge of fantastic improbability. Noeldeke writes wholly as a literary critic, not in any way concerned to explain difficulties, to reconcile contradictions, or to vindicate the doctrine or inspiration of the books which he reviews.

In the class of historical books Noeldeke includes the Pentateuch and Joshua; the Judges, with the appended story of Ruth; the four books of Kings; the Chronicles, with Ezra and Nehemiah, and the books of the Maccabees. In these books the larger part is historical, though there are poetic fragments inserted. None of these books in their present form are of very early origin. Noeldeke assigns to the Pentateuch an earlier date than some of the eminent German critics, but will not allow that any part of it was written by Moses. That it was compiled from various documents of different age and value seems to him unquestionable. The chief value of the book of Genesis is for him ethnographical.

In the second class, that of "romantic stories," Noeldeke reckons five, — Jonah, Esther, Judith, Tobit, and Aristeas. Jonah he conceives to have no claim to be a prophetic book, except in the use of the name of a Jewish prophet as the name of the hero of the story. It was taken into the class of prophetic books only to complete the mystic number of *twelve* minor prophets. The story itself, beautiful in its fancies, is full

of blunders in its facts. It was written to illustrate the duty of obeying the command of God, and the impartial love of God for heathen and Jew alike. Its moral tone seems to Noeldeke much higher than that of most of the Hebrew books, and it is free from Jewish narrowness and exclusiveness.

Esther, as a story, seems to him far inferior to Jonah. It is a wholly unfounded tale of treachery, vindictiveness, and Jewish pride, and, though valuable as a literary monument, is not in any sense a religious book. Judith is a much finer composition, and the Greek text in which it has come to us he holds to be unquestionably the translation of a Hebrew original. The story of Tobit is still more pleasing. This book, Noeldeke thinks, was originally written in Greek, about the middle of the third century before Christ. In the book of Aristeas, which tells the story of the origin of the Septuagint, we have a purely fanciful account, wholly unworthy of credit.

Of *lyric* literature in the Old Testament, the Psalms, and the Book of Lamentations, falsely ascribed to Jeremiah, are the principal specimens; but there are songs scattered through all the historical books. That some of the psalms in the collection were written by David himself, Noeldeke thinks to be possible; but the number of these is not large. He is by no means so much impressed with the beauty and dignity of these Hebrew lyrics as most men have been who have written about them, and finds not only harsh sentiment, but very moderate literary merit, in some of them. The older psalms are the better, — more original, strong, and inspiring than the later. The 19th, 23d, 29th, he thinks finer than any in the later period, except perhaps the 103d and 104th. The famous 119th Psalm, with its cabalistic divisions, seems to him only an endless and tiresome iteration of a very few thoughts. A part of the liturgical songs of praise likewise have, in his judgment, small value. The highest worth of the Hebrew psalms is in illustrating the religious feeling of the people.

The origin of the Lamentations is obscure, but it is nearly certain that they were not written at one time and as a single book, and that they cannot all have come from the same author. The differences in form and expression are sufficient to negative that supposition. Each of the songs is separate from the rest. The songs, too, have no prophetic character, nor have they any special resemblance to the genuine writings of Jeremiah.

The Song of Solomon, Noeldeke treats as a drama, — the only specimen which has come down to us of a kind of literature of which the Hebrews probably had their share. The plot is very simple, and the moral of the play is by no means low or degrading. The drama is

erotic, but not vulgar or sensual. The Christian practice of treating this book as an allegory was borrowed from the Jews, but the book itself has no mark of intentional allegory. It is a story of love and chastity, in dramatic form.

Of didactic works, Noeldeke reckons five in the Old Testament, — the Proverbs, Sirach, Ecclesiastes, the Wisdom of Solomon, and Job. Of these, by far the most valuable is the Book of Job, which is indeed the noblest work in Hebrew literature, the most artistic, the most elevated in thought, the most beautiful in style, and the most religious. It is probably one of the earliest compositions in the collection, though not so early as the reigns of the first kings. The proverbs of Sirach, Noeldeke prefers, on the whole, to the book of Proverbs, so called, of Solomon, which is formed really of three separate collections, with no evidence that Solomon was the compiler of either of them. Ecclesiastes is a late production, the work of a sceptic, low in moral tone, and with no religious sense. The Wisdom of Solomon is wholly an Alexandrine book, teaching the doctrine of immortality, which was unknown to the Jews of Palestine before the captivity. Solomon had no more to do with it than with the book of the Preacher.

The books of the Prophets, Noeldeke examines as a whole, taking the ground, now generally accepted, that the prophets were popular religious leaders and reformers, and that the prediction of distant future events was no part of their function. He gives no special account of the men or their works, but treats them, from the literary point of view, rather as rhapsodists, — such men as the *improvvisatori* of Italy, or as the dervishes of the East. Their burdens are the utterances of passionate patriotism, not always controlled by good sense, and he does not think it necessary to show that these denunciations and promises have an historical value. While this chapter on the Prophets is one of the most careful and interesting in the book, it is certainly too short for the importance of the subject, and leaves many important questions untouched.

Still more unsatisfactory will Noeldeke's treatment of Daniel and the Apocalyptic books be found by the millennial interpreters. To this literary critic the Book of Daniel is only a specimen of a peculiar form of composition, of no more moment to men than the visions of Piers Ploughman, or the dreams of the Prevorst seeress. For the class of books which are called Apocalyptic he has very small respect, except in so far as they are works of art.

On the "Canon and Text," and on the "Ancient Translations," the views of Noeldeke are those of the best critics. And, in general, we may say of this book that, destructive as his criticism seems to be, it is

honest, and appears to have no destructive purpose. Of course, readers will not accept his conclusions without hesitation, and not many will look as calmly as he upon his results. Nevertheless it is worth while to see in a book like this how the Hebrew Scriptures appear to one regarding them from a mere literary standpoint. It is possible that our reverence magnifies their literary merit. One thing is certain, — that most of those who glorify the words of the sacred volume, and compare it with heathen literatures to the disadvantage of the latter, have as little acquaintance with the books that they praise as the books that they depreciate. Only a small part of the Old Testament is habitually read in Christian churches or in Christian homes; and no printing-house publishes more that is systematically skipped and neglected than the printing-house of the Bible Society. The proposition to publish an expurgated edition or an abridgment of the Bible has almost a blasphemous sound; but does not every father of a family practically abridge and expurgate the volume as it is used in his house? Literary criticism of the Scripture may lead to a more just estimate of its worth and its service in forming the taste as well as the spiritual life of men and women to-day.

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8. — *Abriss der deutschen Literaturgeschichte.* Von Dr. E. P. Evans, Professor der neueren Sprachen und Literatur an der Universität von Michigan. New York: Leypoldt and Holt. 1869. 12mo. pp. 240.

This "Abridgment of German Literary History," though the work of an American by birth and lineage, is in no sense an English work translated into the German tongue. The idiom is as purely Teutonic as if it had been written in Germany by a child of the soil. The only thing in the volume that betrays the nationality of the author is a directness and vigor of expression, which is rather English than German. It might well come from a German professor who had familiarized himself with the style and thought of the best English writers, and had learned to prefer short, crisp sentences to the involved periods which are tolerated in German.

This work was probably intended — as it will certainly be widely used — as a text-book for German classes in colleges and high-schools. Nowhere else can so much information concerning German literature be found in a form so condensed and in a style so simple. There are histories enough of German literature, and Professor Evans gives in his Introduction a catalogue of the best; but these are mostly too

bulky for convenient use. A "handy book" has been wanted, which should avoid redundant details, and give in small compass all that it is important to know. Such a work is this "Abriss." Into its 240 small pages is compressed the substance of a score of thick octavos. Nothing of moment in the development of the literature is omitted, and all the important names, both in earlier and later times, are to be found in their proper place. An admirable plan has been most conscientiously and carefully executed.

The book is strictly a history of "literature." Except in the earlier ages, where all writings had more or less of a theological character, it takes no notice of merely scientific or theological writers. It deals with poets, novelists, dramatists, essayists, literary critics, satirists; with historians and philosophers only on their literary side. Luther's Table-Talk, but not his Theses, brings him into this volume. Hardly one of the noted theologians of the present century is even mentioned.

Professor Evans adopts a threefold division of German literary history, — making the first period extend from the earliest time to the end of the twelfth century; the second, from the end of the twelfth to the second half of the seventeenth century; and the third, from that time to our own day. These chief periods are in turn divided into subordinate periods, which again are arranged by threes. Good reasons, not of a mystical kind, are given for this threefold division. The three subordinate periods of the first division are characterized respectively as the German Gothic, the period of migrations; the old High-German, covering more than five centuries, — from the sixth to the eleventh; and finally the twelfth century, which had a literature of its own. Those who have imagined that German literature is comparatively a modern growth, and that before Klopstock and Lessing there was no special literary activity, will be surprised to see how much can be found even in the earlier centuries.

The three subordinate periods of the second division are, first, the thirteenth century, the time of the "Middle High-German"; second, the fourteenth and fifteenth centuries; and third, the time of the New High-German in the sixteenth and far into the seventeenth century. The German literature of this period is quite as rich as the literature of the same period of France and England. The simple outline of it which Professor Evans gives fills nearly half his volume, and contains many of his best critical notices. This was the period of the Nibelungenlied, of the Minnesänger and Meistersänger, of the popular preachers, of the Mystics and of the Reformers. An unexpected company of famous men show themselves in these ages of chivalry, representing the popular feeling of the time far more truly than the aristocratic singers and

play-writers of the French and Spanish courts. The sketch of this period, rapid as it necessarily is, is yet quite as interesting as the account of the better known period of the later German literature. The indebtedness of modern German writers to the writers of this period is made evident.

The second half of the volume is devoted to an account of the third general division, in which there are also three subordinate periods. The richness of the literature of this time, of course, makes it impossible to dwell at length upon any single name. Often a writer of distinction must be barely mentioned, or dismissed with a single line or a single sentence. Even Goethe and Schiller can only have their half-dozen pages in a survey of so large a field. Professor Evans succeeds, however, by a few masterly touches, in giving what is most characteristic of each of the great writers. He has also rescued some authors from undeserved neglect, — notably Karl Immermann, whom he ranks with the very foremost of poets for beauty of style and elevation of thought. It is impossible, he says, to overestimate the indebtedness of the German poetry of to-day to this remarkable writer. "In epic poetry he stands above Schiller; as a philosophic poet he surpasses Goethe, although he lacks the idealistic pathos of the first, and the lyric softness of the second. He wrote ballads very sweetly, which unfortunately are not much known, since no complete edition of his works has yet been published. As a dramatic writer likewise he was very fruitful. He came into literature so young, that the pieces of his youth showed a dazzling color borrowed from romance; but the study of Goethe and Schiller brought him off soon from this false tendency."

To one feature of the book some may take exception. It is a continuous narrative, and is not broken up into separate chapters. The author has preferred to economize space, and to mark the transitions from one period to another, and from one subject to another, by indications upon the margin of the page, an elaborate and carefully arranged table of contents, and a very full index, making it easy to find the place of any writer or the treatment of any theme. For a college text-book this method is perhaps preferable, though it is not so pleasant to the eye. The volume, however, is a great deal more than a college text-book. It is a valuable manual for any student of German, even if he have in his library the larger works from which this is digested. To those who have no access to larger works it will be invaluable. As one of the very few books written by American scholars in the German language, it is a curiosity. We have reason to believe that it is only an *avant-courier* of a full critical history of German literature in the English tongue, which is one of our chief literary needs. No man in the country

is more competent to prepare such a work than Professor Evans. It will be creditable to American scholarship if one of our countrymen can do for the literature of Germany what Gervinus and Taine have done for the literature of England.

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9. — *Publications of the Prince Society. The Andros Tracts.* Boston: Prince Society. Vols. I. and II. 4to. pp. liv., 215; xxiv., 346.

The Revolution of 1689 delivered New England from a tyranny much more oppressive than that from which she was rescued ninety years later, in the reign of King George the Third. Her municipal and legislative institutions, almost coeval with the settlements, had been abolished. Laws were made, taxes levied, courts of justice constituted, judicial, executive, and military officers appointed, by functionaries of the king of England. The swarm of blood-suckers whom Governor Andros collected about him from England and New York, — Randolph, West, Palmer, Graham, Foxcroft, Sherlock, — sold justice, or injustice, at excessive rates. The treacherous Dudley lent to the roguery the support of his great talents and intimate local knowledge. Land-titles as old as the Colony were pronounced void, and the holders were ousted, or required to protect themselves by buying new patents of the Governor. Opposition in the towns was punished by heavy fines imposed on the agitators, or by harsher measures, as in the case of the minister of Plymouth, brought to Boston while suffering from a fit of the gout, and kept standing before his questioners till it seemed as if he would die. The miseries of the local administration were not all that troubled the people. Not unreasonably, they feared that King James would establish Popery in England; and if in England, why not in Massachusetts Bay?

Who were the plotters, and what the consultations, in Boston in the winter of 1688 and 1689, will never be fully known. As early as September, Charles Morton (formerly teacher, in England, of Defoe) preached in Charlestown such a sermon as would have brought him to trial for treason, had not the prosecuting officer been of the opinion that "there were not honest men in Middlesex to make a jury to serve their turn." In November the Prince of Orange landed in England, but he might as well have landed in the moon for any intelligence the Bostonians could have had of his movements for months afterwards, as voyages were then made. On the 4th of April came news from the West Indies of his being on English ground. What the issue of the adventure would be, was of course all uncertain; for, weeks later, the Prince was

still in the west, with a fine army in front of him, across his way to London. But Boston could not wait. On the 19th of April (a day made thrice memorable in Massachusetts annals, — by the first battle of American Independence, eighty-six years later, and by the firing, in Baltimore, on Massachusetts troops, eighty-six years later yet), Andros surrendered to the townspeople the hold on Fort Hill, to which he had withdrawn with his Regulars, and from that day to this he and his king cease to belong to New England history.

Though in the circumstances there could not fail to be great unanimity among the ill-used and insulted people, yet the talking and writing and acting were not entirely on one side. There was spirit also on the other, to support a party animosity which ran extremely high. At that time as well as at other times, there were office-holders and office-seekers who knew how to argue that what put money into their pockets was for the public good and honor. The Governor had about him a set of omnivorous adventurers from abroad, who had no interest in Massachusetts but to pluck her. Joseph Dudley was not the only recreant native, nor was he the only one among the Governor's satellites possessed of eminent capacity. The stranger Randolph was cunning and indefatigable; Palmer was a well-read English lawyer; the Scot Graham did no discredit to his nation's character for craft; and others acted their parts in the matter not lazily nor unskilfully. Boston was already a place of some wealth, acquired by commercial enterprise, and there had collected in it a knot of money-making adventurers from England, who were warm for Church and King, and against liberty and psalm-singing. The liturgy of the Church of England had been read in Boston on Sundays and holidays for three years; and though the congregation was not large, it was composed of material which the Governor might securely trust in.

There was plenty of writing and printing on both sides; and accordingly there are few interesting passages of history better elucidated, except as to those preparatory consultations in respect to which history never gets satisfactory light, unless from the private letters of the actors, when by good fortune these have been preserved to after-times. Of course, in important respects the best authorities for historical composition are writings of a time immediately subsequent to the events recorded. But there is one important qualification of this remark. Contemporaries can have no correct conception of the perspective of an historical picture. The relative importance of events is not disclosed to them. One would not think of looking into a newspaper of June 18, 1775, for an expression of the thoughts appropriate to the action of the day before on Bunker Hill. But, further, different classes of contemporaneous writings have to be discriminated from one another

in respect to their value as authentic records. The newspaper paragraphs must, for the most part, be written and printed not only before the bearing of facts can be estimated, but before facts can be positively ascertained; and in times of party excitement allowance must be made, or rather distrust must be practised, for the disingenuousness which is likely to pervert the utterances of that reckless monster, the ephemeral press. Memoirs printed with the name of the writer may be used with more confidence, — both as being prepared with superior deliberation and wariness, and as affording, through knowledge of the writer's character, a clew to the knowledge of the passions, prejudices, positions, relations, which may have biased or blinded him. An historian delights in getting possession of private letters of the actors in great events, and of their confidants. But it is at his peril if he trusts them implicitly. Actors in great events are liable to have some motive for misleading their correspondents, and the misrepresentations which they are tempted to make are the safer for being made in confidence. And even what they write the most honestly to a friend, they will not write with the same caution, or with the same wholesome sense of responsibleness, as if it were to be submitted to unfriendly or impartial criticism.

There was no newspaper in British America till thirteen years after 1689. There survive not many private letters, probably none from which the sense has not already been extracted for elucidation of the transactions of the period. The pamphlet publications of that day were numerous, but the copies of them still extant are so rare that they are scarcely to be found except in a few public libraries.* The plan of Mr. Whitmore has a capital unity and completeness. In two beautiful volumes he has reprinted the pamphlets and official papers of the period between the deposition of Andros and the granting of the provincial charter of Massachusetts, adding a few pieces, hitherto unpublished, from the archives of Massachusetts and from other sources, and illustrating the whole with a series of learned notes, extremely curious and useful. The collection conveys a very complete idea of the politics, the troubles, and the wrangles of the time. We think Mr. Whitmore judges the principal character too favorably. That King William employed him after his *imbroglio* in New England, and that he administered Virginia without discredit, is no offset to his indecent misdeeds among the Puritan colonists. He had a despotic and insolent nature,

* Mr. Whitmore thinks (p. 190) that the copy from which he prints the "Account of the Late Revolutions in New England, by A. B.," may be unique. We have however seen, and made extracts from, another copy, — we believe in the British Museum.

which was quite after the heart of King James the Second, and which had been vigorously trained in the household of Prince Rupert's mother; and every month of the years since the Restoration had laid up in him its store of venom against the spawn of Roundheads whom he came to teach their place. That was no reason why King William should not employ him in another government. The stern Dutchman liked him not at all the less for his idolatry of prerogative. The new king did not want on his hands the trouble that would be sure to be made if he should send Andros back again to Boston; but there was another colony which for other reasons needed to be held with a tight hand; and the fact that Sir Edmund had been the unflinching instrument of the last tyrant of the Stuart line secured him only the more favorable reception in Virginia when Virginia was to be brought into submission to the elected sovereign. And Andros was a man of sense enough always to know whom he had to deal with. In his new place he could not but act under a salutary conviction that there was watching him from across the water an eye which it was not easy to elude, and that altogether his best safety was in good behavior, — good behavior being now no longer what had been esteemed such in the last reign. The cold and politic king of the Revolution might have often to conceal his knowledge of the treachery of those immediately about him, but any eccentricities on the part of a governor of Virginia would be pretty sure to be brought to a swift reckoning. Andros was not so romantically devoted to the legitimate monarch but that he could consent to serve the usurper when the usurper sat firm in the saddle; and if he undertook that service, he knew too well the quality of the Orange blood to indulge himself in indiscretions. That Andros made a good enough governor of Virginia does not, in the circumstances, at all incline us to reverse the judgment which history has passed on his administration of New England.

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10. — *The Invasion of the Crimea: its Origin, and an Account of its Progress, down to the Death of Lord Raglan.* By Alexander William Kinglake. New York: Harper and Brothers. Vol. II. 12mo. pp. 632.

The Russian war is a contemporary event, for it is but thirteen years since it was brought to a close by one of the many important treaties that take their name from Paris; but it seems as remote as that contest which brought the career of Napoleon I. to a termination. Since 1856 the world has seen the Sepoy war, the Italian war,

the "Holy war" between Spain and Morocco, the Secession war, the war carried on by Prussia and Italy against Austria, the Abyssinian war, and the Paraguayan war, besides some less significant contests. The changes, too, that have taken place, in large part in consequence of the wars just mentioned, are of a gigantic character. That Bengal army, to the exploits of which England owes in great measure her wonderful Oriental dominion, has disappeared; the East India Company has ceased to exist as a political power, and Queen Victoria sits upon the throne of Akbar and Aurungzebe. The Austrian domination over Italy has ceased, and the kingdom of Italy has come into existence. The territorial possessions of the Pope have been reduced to a pitiful fragment. The Bourbons have been driven from the thrones of the Two Sicilies and of Spain, and Protestant preachers are at liberty to expound their opinions in Naples and in Madrid. American slavery, which seemed in 1856 to be so firmly seated, has been overthrown. The Germanic Diet has held its last sitting, and sleeps with the Holy Roman Empire. A new nation has risen in Europe, which challenges the European leadership of France. Great Britain has adopted democratic conditions of suffrage, and disestablished the Irish Church. These changes, so great and so unexpected, which have all occurred in less than twelve years, have dwarfed the Russian war to insignificance. The battles of the Alma and of Inkermann, of Balaklava and the Tchernaya, the bombardment of Sweaborg, and the storming of the Malakhoff, strike men as events equally remote and unimportant, because since their occurrence the world has heard of Delhi and Lucknow, Magenta and Solferino, Gettysburg and Chattanooga, Custozza and Sadowa.

This is so long a series of war-pictures that we underrate the importance of the earliest of them; but the Russian war was the opening act of the great drama to which the Italian war and the German war, the Sepoy war and the Secession war, all belong. It was the beginning of the breaking up of that conservative international system which had existed for almost forty years, and which was the chief result of the victory of the grand alliance formed against Napoleon. The first place in Christendom was held by Russia in consequence of the events of 1812–1815; England not appearing to care to dispute the leadership with her ally, though her part in the anti-Gallican confederacy gave her the primacy while war with Napoleon was going on, as she alone could command those enormous sums of money which rendered possible the fighting of such battles as Vittoria, Leipzig, and Waterloo. The Russian hegemony was established by Alexander I.; but the indecisive character of that czar, who never could be said to know his own mind,

and the shortness of his reign after the settlement of Europe in 1815–1818, prevented it from being very offensive so long as he lived. Alexander was "the soft triumvir" of the Holy Alliance, and, like James I., he was more inclined to talk about arbitrary power than to exercise it. But his early death led to a great change. Under his successor, Nicholas, the most was made of Russia's position; and had he been content with solid power, it is highly probable that his empire would have maintained its leading position to this day. That lead was lost by the inability of the czar to bear the test of long prosperity. After towering above his contemporaries for almost thirty years, the first rude blow of adversity prostrated him, and caused his death so suddenly that it is not strange men were inclined to believe that he left the world after "the high Roman fashion." For a long period he was virtually the arbiter of Europe; and no movement of importance could take place in it without his consent. He was the grand revolution-queller, and his army was a vast European police force. The Poles of "The Kingdom" were subdued by men who had conquered in Turkey and in Persia. Cracow was suppressed in violation of the terms of European treaties. The Turkish dynasty was upheld by Russian forces sent to the Bosphorus to protect it against Mahomet Ali. Hungary, after having achieved her independence of Austria, was prostrated by a larger Russian army than had fought at Borodino; and, had not Radetzky been victorious in Italy, Paskevitch would have marched into that country, and perhaps have achieved new successes on the old battle-fields of Trebbia and Novi.

But, though the talents of Nicholas were great, and his energy corresponded to his talents, he was not content with the substance of power. He required all men to acknowledge his supremacy, and never was more pleased with himself than when his conduct was most offensive to others. The consequence was, that he became the best hated man in Europe, and he was all the more detested because there appeared to be no hope of escape from his supremacy. He was the head of an old dynasty, and he ruled over a nation which had never lost ground from the time it had entered the European system. Nevertheless, the opportunity came. The course he pursued towards Turkey in 1853 gave to France and England good cause for war, and for breaking that power which was so offensive in itself, and so arrogantly wielded. It was impossible for England to consent to give up the East to him; and war was welcome to the new ruler of France, who had an opportunity to deal a damaging blow to the chief of the Continental powers which had overthrown the first Napoleon, and at the same time to gratify the national pride. The contest that followed, though

it did not essentially weaken the Russian empire, nevertheless deprived it of the leadership of Europe, and removed the Muscovite nightmare which had oppressed that continent for a generation. It did more. It made possible, and even easy, the changes in Europe that followed so fast upon the humiliation of Russia. The kingdom of Italy could never have been called into existence had the power of Nicholas remained unshaken; and the continuance of the system of Nicholas would have implied a resolute and successful opposition to that German policy which triumphed in 1866. The Russia that existed from 1814 to 1854 was as much opposed to the unification of Germany as ever was France in the days of the old monarchy. Such men as Cavour, Garibaldi, and Bismarck never could have accomplished what we have seen them bring about, had the strength of the Northern colossus remained unbroken. Even the Sepoy war could not have occurred, had not the Indian soldiers been impressed by the unfounded conviction, — which they shared with men who had better means of knowing the truth, — that the English army had made a poor figure in the contest with Russia.

It is singular that a contest so important in itself, and destined to have consequences so momentous, as the war between Russia and the Western Alliance, should have remained so long without a competent historian. The books which have been written upon it would fill many shelves; but they are either partial narratives, or semi-scientific in their character, or have been prepared for some special purpose. The general histories of the war do not rise above the rank of compilations, and the authors of them have not had access to the best authorities. Mr. Kinglake's work is the most striking exception to the truth of this remark; and even that is not a history of the war. It is the history of "The Invasion of the Crimea"; and, though the operations consequent upon that invasion were so striking as to concentrate attention, and to cause men often to speak of the "Crimean war," it is not to be forgotten that the contest began almost a year before the Allies saw Sebastopol, and that it was waged in Asia as well as in Europe, on the Danube as well as on the Alma, in the Baltic as well as in the Euxine. Then Mr. Kinglake writes only of that part of the war in the Crimea which closed at the death of Lord Raglan, June 28, 1854, ten weeks before the storming of the Malakhoff, and almost nine months before the contest was brought to a close. So far as his work extends, it satisfies every expectation, and makes us regret that he did not so plan it as to make it include a full account of the entire war. Mr. Kinglake's reputation as a writer leaves no occasion to speak of the style of his narrative, and we are convinced that he has written with as much honesty as spirit.

The volume before us, which contains the matter to be found in the third and fourth volumes of the English edition, is a history of thirty-five days, beginning with the evening after the battle of the Alma, on the 20th of September, 1854, and ending with the evening after the battle of Balaklava, on the 25th of October. A great critic — now no more — has objected to Orme's work on the foundation of the British empire in India, that it is minute even to tediousness; adding that in one of his volumes "he allots, on an average, a closely printed quarto page to the events of every forty-eight hours." What would he have said had he lived to read the work of an historian superior "in style and power of painting" to Orme, who allots on an average nearly a closely printed duodecimo page to the events of every forty-eight minutes? We do not object to this minuteness of narrative, for Mr. Kinglake is writing for a specific purpose, and we obtain from his vigorous pages a clear idea of the causes of the failure of the Allies to carry through their original plan, which was based on the belief that Sebastopol would fall before their efforts in a few days.

The current notion is, that the English were responsible for the long and costly siege of Sebastopol; that their timidity and sluggishness was a drag upon the vivacity and energy of the French; and that such men as St. Arnaud and Canrobert were restrained by Lord Raglan from the adoption of measures that would have given Sebastopol to the Allies as quickly as Wellington took Peronne. This estimate of the relative military merits of the two parties to the Western Alliance began to prevail at the very beginning of the war, and it has gained in strength almost to the present time. It had its origin in the almost universal conviction that the French are the first of nations in respect to the martial virtues; while the English, though of undoubted courage, and stubborn to a fault in action, are not otherwise good soldiers. French writers have afforded support to this assumption that English slowness was the cause of that delay which fixed the Allied armies around Sebastopol, when by active measures they might have entered it eleven months before the Russians evacuated it on the fall of the Malakhoff. It was not till Mr. Kinglake appeared in the field that the English side could obtain a hearing.

The first part of his work, which appeared six years ago, was devoted for the most part to the preliminaries of the war, and hardly touched upon military proceedings; but the second part relates almost entirely to the conduct of the war, and shows clearly where the trouble was with the Allies. The French generals showed the same lack of appreciation of the character of the war which was exhibited by some of our generals during the recent struggle. There are, indeed, some

striking points of resemblance between the errors of the Allies in 1854 and the errors of Americans in 1864, which should render us more charitable than we sometimes are when we discuss the history of the war in the Crimea. Between the operations against Sebastopol and the operations against Richmond there is much in common. From the beginning of the expedition to the Crimea to the fall of Sebastopol about eleven months elapsed: it was was eleven months, wellnigh to a day, from General Grant's first movement against Richmond to the entrance of the national forces into that much-sought city. The long siege of Sebastopol was the consequence of the neglect of the Allies to seize the Malakhoff, which might have been taken with little exertion immediately after their arrival before the town; and the long siege of Richmond was the consequence of the neglect of our forces to seize Petersburg, which was open to seizure for six weeks after the beginning of the last Virginian campaign. In each case the neglect arose from want of information; and in each case the want of information led to the loss of thousands of lives and the expenditure of millions of money. The Russian war was drawn out to great length because the Allies did not know the key of the position they were assailing; and the Secession war was prolonged full half a year because it was not seen that the vital point of the Rebel position lay miles from the Rebel capital. The Allies, after losing, or throwing away, as Mr. Kinglake shows, several opportunities to win the stake for which they played, were forced to adopt the "hammering" process, and to beat down or carry the strong works that were created by the genius of Todleben.

English critics see, or affect to see, something providential in the course that events took in the Crimea in consequence of the failure of the Allies to take possession of Sebastopol immediately after their brilliant victory of the Alma. Russia, they say, was reduced to the necessity of defending Sebastopol, and this exhausted both means and men, as that town lies at the southern extremity of the Czar's dominions, and could be reached only by long and toilsome marches, in the course of which thousands of men perished. This idea is not original with English critics. They are indebted for it to no less a personage than Napoleon III. When the siege of Sebastopol was at its height, the French Emperor compared it to a running sore, through which all the strength of the sufferer was passing away. The figure, though imperial, is more striking than elegant, and should rank with the coarsest as well as most famous of the facetiæ of the Emperor Vespasian. But the object of war is to succeed, — to win victories as rapidly, as decisively, and as brilliantly as possible, so as to bring the moral power of the world to the support of the victors. Had the Allies taken Sebastopol in three or four days after the Alma, destroyed the Euxine

fleet and the fortifications of the town, and seized the stores there deposited, they would have accomplished far more than was attained by the capture of the Malakhoff almost a year later. It would have been impossible to disguise the fact that the great military monarchy which had governed Europe for a generation had proved unequal to the task of defending that stronghold which had been created as the base of operations against the East. The Allies would have been able to attack other parts of the Czar's dominions, and the Eastern question, which still perplexes nations with fear of change, could have rested for half a century. It is not impossible that the Polish question too might have been settled, and Poland have been recreated, to serve as the shield of Europe. Even Austria has been disposed, since 1814, to consent to the revival of the Polish nation; and she would not have hesitated to join a European Alliance to effect such a revival, had the Allies been entirely successful in the Crimea immediately upon their invasion of that peninsula. As matters turned, the Allies, instead of taking Sebastopol, were put on the defensive, and had to fight long and hard to maintain their hold on Crimean ground, that they might be able, when reinforced, to besiege the town. Their command of the sea enabled them to bring up reinforcements in great numbers, and to do so without loss, while the Russians were compelled to send their men by long and forced marches, so that many of them died without seeing the country they had been ordered to defend, and those who reached it did so in a state of extreme exhaustion. It was the naval power of the Allies that enabled them to effect their purpose, so far as that purpose was effected. They owed as much to their ships as we owed to ours in the contest we waged against the Rebel confederacy.

Mr. Kinglake devotes almost two hundred pages of his second volume (of the American edition) to an account of the battle of Balaklava, in the course of which occurred that wild incident, the charge of the Light Brigade. Less has been said of his account of Lord Cardigan's memorable charge than might have been expected, — probably because that brilliant cavalry commander is dead. Had he lived, he would doubtless have had criticisms to make on some of Mr. Kinglake's observations. The charge was the consequence of a misunderstanding, which leaves no indelible stain on the reputation of any man. Lord Raglan's "third order" seems plain enough to us, who know exactly what he intended it should mean because we have all the explanations that make it perfectly clear; but he must be a bold man who can say that, under the circumstances in which it was received, he would have given to it a different interpretation from that which it received from Lord Lucan. Then came the "fourth order,"

which led to the charge; and though Mr. Kinglake may be right in saying that there is no word in that order "which is either obscure or misleading," it was a most unlucky circumstance that it should have been conveyed to Lord Lucan by Captain Nolan, whose manner was highly offensive to his superior officer, against whom he seemed to insinuate a charge of cowardice. Nolan assumed, we think, that Lord Lucan knew the state of things on the field as well as he himself did, who had just overlooked it; whereas Lord Lucan had no such knowledge; and he inferred that his superior officer objected to making an attack which he had been ordered to make. But the two men were thinking of entirely different positions, — Nolan, of the Causeway Heights; Lucan, of the North Valley. No explanation being made, the charge was ordered, and Nolan was killed before he could bring about an explanation. No fair-minded man can fail to sympathize with Lord Lucan, who was placed in the most distressing position that a soldier can occupy, and whose error of interpretation was such as nine officers out of ten might have fallen into without any impeachment of their capacity. He obeyed what he believed to be a most extraordinary order, and his conduct was strictly soldier-like. Lord Cardigan also obeyed orders, after making such representations as he thought circumstances demanded. Mr. Kinglake follows him down that "valley of death" into which rode the "noble six hundred," — men deserving to rank with those who held the pass of Thermopylæ against the entire power of Persia. Nothing can be more entrancing than his narrative, in which every incident of the charge is told that his conscientious and well-directed labors have enabled him to recover and to preserve. As a French officer said at the time, "It was not war," — for war is a business, as much so as the buying and selling of cotton or flour, — but it was a most daring and dashing act, which will live long in men's memories, and will never be recalled without causing the blood to course more rapidly. Mr. Kinglake comes to the conclusion, in summing up the results of the battle of Balaklava, "that there was no such decisive inclination of the balance as to give to one side or the other the advantage which men call a victory." This means that it was "a drawn battle"; but we incline to the opinion that the advantage of the Russians on the 25th of October was sufficient to lead to that attack on the Allies which they made eleven days later, and which brought about the combat of giants at Inkermann. In this, though they were repulsed, they dealt so severe a blow to the invading force, that the fall of Sebastopol was delayed till the close of the next summer. Had they not felt that the battle of Balaklava was, on the whole, favorable to them, they would not have ventured to repeat their attempt on so great a scale so soon after testing the power of the Allies in the field.

LIST OF SOME RECENT PUBLICATIONS.

1. The Science of Thought; a System of Logic. By Charles Carroll Everett. Boston: William V. Spencer. 1869. 12mo. pp. xii., 423.

2. A Compendious German Grammar. By William D. Whitney, Professor of Sanskrit and Instructor in Modern Languages in Yale College. New York: Leypoldt and Holt. 1869. 12mo. pp. vii., 248.

3. A German Reader in Prose and Verse, with Notes and Vocabulary. By William D. Whitney, Professor of Sanskrit and Instructor in Modern Languages in Yale College. New York: Leypoldt and Holt. 1869. 12mo. pp. 231 (text).

4. The Literature of the Age of Elizabeth. By Edwin P. Whipple. Boston: Fields, Osgood, & Co. 1869. 12mo. pp. 364.

5. George Eliot's Novels. Author's Household Edition. In Five Volumes. Adam Bede. The Mill on the Floss. Romola. Boston: Fields, Osgood, & Co. 1869. 12mo. pp. 315, 315, 344.

6. Reminiscences of James A. Hamilton; or, Men and Events, at Home and Abroad, during Three Quarters of a Century. New York: Scribner & Co. 1869. 8vo. pp. 647.

7. Elements of the Greek Language; taken from the Greek Gra[illegible] James Hadley, Professor in Yale College. New York: D. Appleton & Co. 1869. 12mo. pp. 246.

8. Electricity in its Relations to Practical Medicine. By Moritz [illegible]. Translated from the Third German Edition by William A. Hamm[illegible], M. D. New York: D. Appleton & Co. 8vo. pp. xxi., 497.

9. The Works of Horace. Edited, with Explanatory Notes, by Th[illegible] Chase, Professor in Haverford College. Philadelphia: Eldredge and Bro. 1869. 12mo. pp. 429.

10. The Secret of Swedenborg: being an Elucidation of his Doctrine of the Divine Natural Humanity. By Henry James. Boston: Fields, Osgood, & Co. 1869. 8vo. pp. xv., 243.

11. Essay on Divorce and Divorce Legislation, with Special Reference to the United States. By Theodore D. Woolsey, D. D., LL. D., President of Yale College. New York: Charles Scribner & Co. 1869. 12mo. pp. 308.

12. The American Annual Cyclopædia and Register of Important Events of the Year 1868. Vol. VIII. New York: D. Appleton & Co. 1869. 8vo. pp. 796.

13. Latin Lessons, adapted to the Manual Latin Grammar. Prepared by William F. Allen, A. M., Professor of Ancient Languages and History in the University of Wisconsin; and Joseph H. Allen. Boston: Edwin Ginn. 1869. 12mo. pp. x., 134.

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